

Health Status of Racial and Ethnic Minorities in Nebraska

September 2003

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Health Status of Racial and Ethnic Minorities in Nebraska

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ADA/AA/EOE

Opening Statement from the Director of Health and Human Services

September, 2003

Dear Health Advocate:

We are pleased to provide you with the year 2003 comprehensive report, "Health Status of Racial and Ethnic Minorities in Nebraska."

Most people in Nebraska enjoy a relatively healthy and good quality of life. There continues, however, to be significant disparity in the overall health status and quality of life for racial/ethnic minorities in Nebraska. Since the establishment of the Office of Minority Health in 1992, it has become increasingly apparent that health care professionals, community advocates, and consumers must develop effective ways of meeting the challenges presented by our rapidly changing and culturally diverse society.

We thank you for your interest in this report and hope you find the information useful in planning, implementing and evaluating public health efforts.

For more information or additional copies of this report, please contact the Nebraska Office of Minority Health at (402) 471-0152.

Respectfully,

A handwritten signature in black ink, appearing to read "Ron Ross", written in a cursive style.

Ron Ross, Director
Nebraska Department of Health and Human Services

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INTRODUCTION

Addressing the challenge of improving the health of members of racial and ethnic populations is a shared responsibility that requires the active participation and leadership of government—federal, state and local; health care providers; businesses; educators; community leaders; advocacy groups; and the public. In order to meet this responsibility, Nebraska needs to ascertain the current health status of racial and ethnic minorities and to establish goals and objectives to achieve improvement. This report is an important step and builds upon “*Health Status of Racial and Ethnic Minorities in Nebraska Report*” published in 2001. The U.S. Surgeon General has established a goal of zero disparities in health status between the racial/ethnic minority population and the white population by the year 2010. Many studies at both the national and state levels have documented these disparities.

Data collection, analysis, and reporting are vitally important. Limited data on racial and ethnic minority health conditions can make it difficult for agencies to identify health disparities, justify the need for special initiatives targeted toward these populations, and measure progress made by state initiatives. It is important to examine and analyze the ability of current data collection systems to set baseline standards for minority health status.

This document is a compilation of data and information about the health status of racial and ethnic minorities in Nebraska. The data utilized in this report is derived from various sources of the Health and Human Services System as well as national resource materials. The purpose for this document is to provide a picture of the current health status of racial and ethnic minorities in the state.

This report is organized in such a way to provide information in the following format: introduction, summary of results (which summarizes the demographics of racial and ethnic minorities, disparities among racial and ethnic minority groups in Nebraska, as well as synopsis of the health status of each of the racial and ethnic minorities). This is followed by methodology of data collection and data limitations. Described in details include the demographics, socioeconomic status of racial and ethnic minorities, access to health care and utilization of preventive health care services. Additionally, the report then describes the general health status of racial and ethnic minorities in Nebraska, mortality and disease incidence, years of potential life and leading causes of death.

Inclusive in this report is a “health issues” section. Under this section, 11 separate health indicators are included and described in this order: cardiovascular disease, cancer, maternal and child health, unintentional injuries, violent and abusive behavior, diabetes, cirrhosis, sexually transmitted disease, HIV/AIDS, immunization and asthma. Under each of these health indicators, current rates (mortality, incidence/prevalence), risk factors, years of potential life lost, and progress toward the Nebraska 2010 Health Goals and Objectives were described. Data collection and analysis thereof will be described in the methodology section. At the end of this report, is provided a glossary of terms and abbreviations to assist the reader.

This report presents some of the most striking disparities in health status, access to health care, and prevalence of risk factors between the white population of Nebraska and each of the four largest racial and ethnic population groups in the state. The identification of these disparities is an important step in the effort to eliminate them and will help the HHS System develop appropriate intervention strategies.

Nebraska's Office of Minority Health and Human Services serves a pivotal role for federal, state, tribal and local efforts as they work together to improve the health status of the state's minority and ethnic populations. Eliminating disparities will require a strong partnership among both the traditional and nontraditional public health-related organizations.

EXECUTIVE SUMMARY

SUMMARY OF RESULTS

Health Status of Racial and Ethnic Minorities in Nebraska

- According to the 2000 U.S. Census reports for Nebraska, Native Americans (33 percent) have the highest rates for poverty followed by African Americans (27.4 percent).
- Among racial and ethnic minority children under 18 years of age, Native Americans (38.9 percent) and African Americans (38.3 percent), have the highest rates for poverty compared to white (9.5 percent) children under 18 years of age.
- Access to health care indicates that 9.1 percent of Nebraskans 18 and older, as well as 32.1 percent of Hispanics, 20 percent of Native Americans, 16.9 percent of Asian and 16.3 percent of Africans Americans, 18 years and older, have no health insurance.
- Nearly 17 percent of Hispanic Americans (16.5 percent) and African Americans (16.4 percent), 14.7 percent of Native Americans and 9.8 percent of Asian Americans, compared to whites (6.4 percent), could not afford to see a doctor due to cost, according to the Nebraska 1998-2002 BRFSS.
- Mortality rates and incidences are in some instances high for different health indicators, and they varied among racial and ethnic groups and in many cases are higher than white Nebraska as can be seen in the report. For instance, the death rate due to diabetes is 4.9 times as high for Native Americans and 2.4 times as high for African Americans, as the rate for white Nebraskans. The incidence of diagnosed cases of HIV/AIDS for African Americans is 11.2 times the white rate and for Native Americans (5.4 times) and Hispanics (4.7 times) the white rate.
- Although the incidence of diagnosed cases of STD for African Americans slightly decreased, yet the rate is 15.8 the white rate while the rate for Native Americans is 5.6 times and for Hispanics, 2.9 times as high as the white rate.

Mortality rate due to homicides is 10.2 times as high for Native Americans and 10.0 times as high for African Americans as the rate for whites (Table 2).

Demographics

According to the US Census Bureau Census 2000, Nebraska's total population reached 1,711,263 during the census year. When all minorities who checked more than one race (multiple race) in the 2000 Census forms are considered, the racial and ethnic minority population numbers 216,769 or approximately 12.7 percent of the state's total population (*Figure 2*). However, from 1990 to 2000, Nebraska's racial/ethnic minority population who only checked single race in the 2000 Census forms, increased by 68.3%, from 119,205 to 200,629 (*Table 4*). By contrast the overall population grew by 8.4 percent, with a comparatively small increase, 3.6 % among the white population. The minority population continues to grow much more rapidly than the white population.

- The Hispanic or Latino population in Nebraska is the largest and most rapidly expanding minority group in the state. During 1996-2000, the Hispanic population increased by 49.2 percent according to the Census 2000 data. Other minority populations experienced slight increases: the Asian population grew by 8.5 percent, African American population increased by 6.5 percent, and the Native American population has grown by 2.5 percent. Between 1990 and 2000, the most outstanding change in the minority population is that the Hispanic or Latino population increased by 155.4 percent. Thus the growth in the Hispanic population from 36,969 in 1990 to 94,425 in 2000, accounted for 70.6 percent of the total growth of the racial and ethnic minority population. The health implications and related needs of the growing racial and ethnic minority population will have an impact on the health care delivery system in the state.
- Hispanics now make up more than 5.5 percent of Nebraska's total population, numbering more than 94,425. According to the U.S. Census Bureau Census 2000, Hispanics or Latinos in Nebraska includes populations with origins in Mexico, Puerto Ricans, Cubans, and other Hispanics or Latinos. Mexicans are by far, the largest group of Hispanics in Nebraska as they make up a total of 71,030 or 75.2 percent of the total Hispanic population (and 4.2 percent of the total population in Nebraska).
- The number of Hispanic Americans in the state will reach approximately 145,000 or an increase of 53.6 percent by 2025, according to the U.S. Census Bureau 2000.
- According to the U.S. Census Bureau 2000, African Americans number 68,541 or 4.0 percent of the total population in Nebraska, and increased in size by 19.4 percent between 1990 and 2000, having grown from 57,404 to 68,541. Currently, there is no separation of African Americans from recent African immigrant or refugee populations coming to Nebraska from countries such as Nigeria, Kenya, Sudan, Ethiopia, etc. Rather all populations are grouped under the category *African Americans*. The challenge created by this omission is that the diversity within and between populations arising in Africa, as well as the differences between recent arrivals to African American and differences among African Americans, cannot be distinguished. Each population has their own unique health issues and needs which should be considered when designing health interventions. It is estimated that the African American population will expand by 59.0 percent or a total of 109,000 by 2025. Consequently, Nebraska health services should make an effort to identify this population specific data for optimal health interventions and programs.
- Asian Americans number 22,767 or 1.3 percent of Nebraska's population, and experienced the second largest population increase of 83.3 percent from the 1990 population of 12,422 to 22,767 in 2000. According to the U.S. Census Bureau 2000, the Asian community in Nebraska is made up of people with origins in India, China, the Philippines, Japan, Korea, Vietnam and countries, with the Vietnamese being the largest group within the Asian community. The Asian American population in Nebraska is expected to reach 40,000 or grow by about 75.7 percent by 2025.
- According to the U.S. Census Bureau 2000, Native Americans and Alaska Natives make up 14,896 or 0.9 percent of the Nebraska total population. There are four federally recognized Native American tribes in Nebraska. They include the Santee Sioux Nation, now headquartered in Knox County in Northeast Nebraska, the Ponca Tribe, also located in Knox County, the Omaha and Winnebago Tribes, both located and headquartered in

Thurston County. In addition, a large number of Native Americans reside in the urban and rural parts of Nebraska. For example, Native Americans live near the borders of the Omaha Reservation, the Winnebago Reservation, the Ioway Sauk (Sac) and Fox Reservation, the Pine Ridge Indian Reservation, the Rosebud Reservation, and the Santee Sioux Reservation. Together, these groups of Native Americans experienced a 20 percent increase from 12,410 in 1990 to 14,896 in 2000, according to the Census 2000. The Native American population is expected to reach 25,000 people by 2025, an increase of 67.8 percent.

New immigrants such as the Sudanese are also increasing in number. It is estimated that more than 50 percent of all Sudanese in the U.S. are found in Nebraska. For instance Sudanese in Omaha are estimated to number between 5,000 and 7,000; Sudanese in Lincoln number over 1,000 while in both Bellevue and Norfolk, their numbers are estimated to be near 1,000 respectively. There is also a growing number of the Sudanese population in both Grand Island and Lexington areas of Nebraska. According to the OMH report, *Sudanese Refugee Focus Groups: Preliminary Results and Resulting Research* 2002, a study by Drs. Mary S. Willis of the University of Nebraska Lincoln, and Onyema Nkwocha of the Office of Minority Health, Nebraska HHS, "Based on focus group discussions, it appears that the majority of Nebraska's Sudanese refugee population belongs to one of the most well-known tribes from Southern Sudan, the Nuer...there are also... other tribes indigenous to south, central, or even western Sudan including the Dinka, the Shilluk, the Nubans (or Nubians), the Acholle, the Maban, the Murle, and the Anyuak...Most importantly, *refugees wish to be distinguished from 'immigrants' that have also come to the US from Sudan.*," (Willis and Nkwocha 2002, pp. 6-7).

DISPARITIES AMONG RACIAL AND ETHNIC MINORITY GROUPS IN NEBRASKA

Tables 1 through 3 present some of the most striking disparities in health status, access to health care, and prevalence of risk factors between the white population of Nebraska and each of the four largest racial and ethnic minority population groups in the state.

- ❖ In 2001, the average life expectancy for the state of Nebraska was 78.3 years; 75.6 years for males and 80.7 years for females.
- ❖ The average life expectancy for the state of Nebraska in the three-year period, 2000-2002 was 78.3 years for whites, 71.6 years for African Americans and 67.9 years for Native Americans.
- ❖ During 1998-2002, a total of 76,628 deaths occurred in Nebraska at an age-adjusted rate of 813.1 deaths per 100,000 population.
- ❖ In Nebraska, during 1998-2002, heart disease in all forms accounted for a total of 21,804 deaths. Of the total 4,094 deaths among the racial and ethnic minority population, heart disease accounted for 20.7 percent or a total of 848 deaths.
- ❖ Of the total 4,094 deaths among the racial and ethnic minority population, stroke accounted for 6.0 percent or 247 minority deaths.
- ❖ In Nebraska, the age-adjusted YPLL rate for 1998-2002 for all races combined was 6,279.2 years per 100,000 population, indicating a decrease of 544.2 years per 100,000 when compared to the 1993-1997 YPLL rate (6,823.4).
- ❖ Heart disease is the leading cause of death among African Americans, Native Americans, and whites in Nebraska. Native Americans have the highest rate of mortality (435.7 deaths per 100,000 population) and are 1.9 times as likely to die of heart disease as whites. African Americans have the second highest rate of heart disease mortality (280.4) and are 1.2 times as likely to die of the disease as whites.
- ❖ The death rate due to stroke is 1.6 times as high for African Americans and 1.3 times as high for Native Americans as the rate for white Nebraskans.
- ❖ In the five-year period, 1998-2002, cancer was the leading cause of death among Asian and Hispanic Americans. In the same period, cancer was the second leading cause of death among African Americans, Native Americans, and white Nebraskans. African Americans are 1.4 times and Native Americans, 1.2 times more likely to die from cancer than white Nebraskans.
- ❖ During 1998-2002, Hispanic Americans (39.4 percent), African Americans (37.0 percent), and Native Americans (32.7 percent) were more likely than Nebraskans (37.1) overall.
- ❖ In 2002, Native Americans (50.9 percent – based on small number), African Americans (33.4 percent) and Hispanic Americans (27.2 percent), and 5.5 percent of Asian Americans 18 years and older, were more likely than all of Nebraskans (23.2 percent) to be obese.

- ❖ African Americans have the highest number of low weight births (129.1 per 1,000 live births) in Nebraska. Both Native Americans (115.2 births per 1,000 adolescent girls) and Hispanic Americans (110.7) have high rates of teen births.
- ❖ Native Americans have the highest rates for unintentional injury (107.7/100,000) deaths and motor vehicle fatalities (43.6/100,000) of any racial or ethnic group in Nebraska for 1998-2002.
- ❖ Native Americans in the state are 4.9 times more likely to die of diabetes-related causes, than white Nebraskans. The diabetes-related death rate for African Americans is 2.4 times greater and the rate for Hispanic Americans is 1.6 times greater than the rate for white Nebraskans.
- ❖ Female African Americans are 2.9 times more likely to die from diabetes-related causes than their white counterparts.
- ❖ At the rate of 81.8 deaths per 100,000 Native Americans are 13.6 times more likely to die from cirrhosis of the liver than whites.
- ❖ African Americans and Native Americans in Nebraska have the highest incidence of HIV/AIDS, with African Americans having a relative risk of 11.2, and the Native Americans, 5.4 and Hispanics, 4.7.

African Americans

- ❖ According to 2000 U.S. Census, African Americans number 68,541 or comprise 4.0 percent of the population of Nebraska.
- ❖ The proportion of African Americans in Nebraska living in poverty (27.4 percent) is more than three times the rate for white residents (8.2 percent). This rate is also higher than the poverty rates for every other racial or ethnic minority group in the state except Native Americans (33.0 percent), according to the U.S. Census 2000 data.

Access to Care

- ❖ During 1998-2002, 16.3 percent of African American adults in Nebraska reported having no health insurance, compared to 9.1 percent of white adults. Also, 16.4 percent were unable to see a doctor at some time in the last twelve months due to potential cost of care (*Table 1*).
- ❖ African Americans were more likely to have had a routine check-up in the past year (76 percent) than white Nebraskans (67.8 percent).

Table 1
Summary of Access to Care, Social Status and General Health Indicators
Among Nebraskans Aged 18 and Older
By Race or Ethnic Origin (1998-2002)

Indicator	African American (%)	Native American (%)	Asian American (%)	Hispanic American (%)	White (%)
No Health Insurance	16.3	20.9	16.9	32.1	9.1
Unable to see doctor due to cost in past 12 month	16.4	14.7	9.8	16.5	6.4
Had routine checkup in past 12 months	76.0	78.1	67.3	58.0	67.8
Mothers receiving inadequate prenatal care (Kotelchuk Index)	22.2	26.4	10.6	21.3	9.0
Self-rated health status “Fair” or “Poor”	20.5	15.5	12.2	13.2	12.3
Poverty Rates* (2000)	27.4	33.0	12.8	20.4	8.2
Poverty Rates* – Children Under Age 5	42.7	36.7	12.6	25.0	10.4
Poverty Rates* -- Children Aged 5-17 Years	36.7	35.4	9.6	23.2	9.3
Poverty Rates* -- Children Under Age 18	38.3	38.9	10.3	23.8	9.5
<p>* % with incomes below 100% of federally-designated poverty level – All poverty rates are for 2000. SOURCE: Inadequate prenatal care data from Vital Statistics in Nebraska HHSS; All other data from the 1998-2002 Nebraska Behavioral Risk Factor Surveillance System; U.S. Census 2000.</p>					

Health Status

- ❖ One-fifth of African American adults (20.5 percent) rated their health status as either “fair” or “poor,” compared to 12.3 percent of white Nebraskans.
- ❖ More than one-fifth of African American mothers (22.2 percent) received inadequate prenatal care, based on the Kotelchuk Index.
- ❖ Infant mortality rate (17.9/1,000 live births) was 2.8 times as high for African Americans as for whites in 1998-2002 (*Table 2*). This rate was also higher than the rates for other racial/ethnic groups in Nebraska. Low birthweight rates (129.1/1,000 live births) for African Americans were also double the rate for whites.
- ❖ A closer study of the ten-year period 1993-2002 revealed that death rates for African American babies slightly rose from 20.4 per 1,000 live births in 2000 to 20.9 in 2002.

Table 2
Disparity in Selected Health Status Indicators
Of Nebraska’s Racial/Ethnic Minority Residents
Relative Risk of Mortality or Infection Compared to White Population
1993-1997 vs. 1998-2002

Population Group	RELATIVE RISK OF MORTALITY OR INFECTION IS 1.5 OR GREATER* THAN...					
	Rate Increased for:	Relative Risk	Rate Remained Stable for:	Relative Risk	Rate Decreased for:	Relative Risk
African American	HIV/AIDS Incidence	11.2	Suicide	7.7	STD Incidence	15.8
	HIV/AIDS Death	5.3	Low Birth Weight	2.0	Homicides	10.0
	Diabetes-Related Deaths	2.4			Asthma Deaths	5.0
	Breast Cancer Deaths (Fem)	1.8			Prostate Cancer Deaths	2.0
	Lung Cancer Deaths (Males)	1.7				
	Stroke Deaths	1.6				
Native American	Homicides	10.2			Cirrhosis Deaths	13.6
	STD Incidence	5.6			Suicide	8.6
	HIV/AIDS Incidence	5.4				
	Diabetes-Related Deaths	4.9				
	Heart Disease Deaths	1.9				
	Stroke Deaths (Males)	1.6				
Asian American	Asthma Deaths	2.2				
	Heart Disease	0.7			STD Incidence	1.4
Hispanic American	Cancer Deaths (All)	0.9				
	HIV/AIDS Incidence	4.7			STD Incidence	2.9
	Homicides (Males)	3.7			Cirrhosis	2.5
	HIV/AIDS Death	2.2				
	Diabetes-Related Deaths	1.6				

*Relative Risk for Whites is 1.0 throughout this table and report.

SOURCE: Nebraska HHSS, Vital Statistics, HIV/AIDS Surveillance Program, Communicable Disease Section.

- ❖ Life expectancy for African Americans is 71.6 years, while life expectancy for African American males (68.1 years) was lower than that for females (75.1 years).
- ❖ African Americans lost more than twice as many years of potential life (YPLL) per 100,000 population (12,587.1) as white Nebraskans (6,208.7).
- ❖ Heart disease (532 deaths) and cancer (500 deaths) were the number one and two leading causes of death among African Americans in the five-year period 1998-2002
- ❖ Although mortality rates for heart disease (280.4 deaths/1,00,000), decreased by 25.0 percent, African Americans are 1.2 times more likely to die from the disease than do whites.
- ❖ African American males are close to 13 times more likely to die as a result of homicide than white males, while all of African Americans are 10 times more likely than whites to die from homicides.
- ❖ Incidence of diagnosed cases of AIDS among this population group is up 25.6 percent from the previous five-year period, according to Nebraska's Health and Human Services System's HIV/AIDS Surveillance Program. Incidence among whites decreased, averaging 4.5 cases per 100,000 population annually in 1998-2002. The incidence rate for AIDS among African Americans (50.5) is 11.2 times the white rate. African Americans are also 5.3 times as likely to die of AIDS as whites in Nebraska.
- ❖ Mortality rates for strokes, and diabetes-related causes among African Americans also increased in the current five-year period. African Americans are 1.6 times as likely as white Nebraskans to die from strokes and 2.4 times as likely to die from diabetes-related causes.
- ❖ African American females are 2.9 times as likely as whites to die from diabetes-related causes.
- ❖ African American men are also 2.0 times as likely to die from prostate cancer as white men in the state. African American women are 1.8 times as likely as whites to die from breast cancer during 1998-2002.
- ❖ The incidence of sexually-transmitted disease (STDs) is currently 15.8 times as high for African Americans as for whites and also much higher than rates for other racial/ethnic groups in the state.
- ❖ Reductions have been made in colorectal cancer mortality, cervical cancer mortality, and prostate cancer mortality among African Americans, yet African American males are 1.7 times as likely to die from lung cancer as whites.

Risk Factor Prevalence

The following information was developed from the data collected by the Nebraska Behavioral Risk Factor Surveillance System (BRFSS) in 1994-1998.

- ❖ African Americans continue to report a higher prevalence of obesity (31.5 percent) and cigarette smoking (19.2 percent) than white (20.6 and 17.0 percent) Nebraskans (*Table 3*). Prevalence of no leisure time physical activity for this group (31.6 percent) is about the same as for Hispanics (35.6 percent); rates for both of these groups were higher than the white (27.0 percent) rate.

Table 3
Summary of Risk Factor Prevalence
Among Nebraskans Aged 18 and Older
By Race or Ethnic Origin
1998-2002

Indicator	African American (%)	Native American (%)	Asian American (%)	Hispanic American (%)	White (%)
Life Style Risk Factors*					
Cigarette Smoking	19.2	14.2	11.9	16.0	17.0
Obesity (BMI)	31.5	24.8	6.4	22.0	20.6
No leisure-time physical activity	31.6	19.0	25.6	35.6	27.0
Lack of Screening*					
Blood pressure checked (past 2 years)	93.4	94.3	96.5	91.5	94.7
Ever Told Blood Pressure High	29.4	22.0	11.5	11.1	22.6
Cholesterol level checked (past 5 years)	63.2	58.0	51.6	52.4	66.0
Ever had mammogram (Women aged 40 & older)	87.6	73.8	74.6	83.5	84.9
Pap test in past 2 years (women aged 18 and older)	82.7	78.0	64.5	77.3	76.6
Maternal and Child Health Factors **					
Inadequate prenatal care (Kotelchuk Index)	22.2	26.4	10.6	21.3	9.0
Mothers who smoked during Pregnancy	15.8	32.2	4.9	4.7	15.1
Teen births/1,000 females (aged 15-19)	95.8	115.2	24.8	110.7	34.6
SOURCES: *Nebraska HHSS, 1998-2002 Nebraska Behavioral Risk Surveillance System. ** Nebraska HHSS, Vital Statistics.					

- ❖ African Americans are generally more likely than members of other racial/ethnic minority groups in Nebraska to receive health screening. Compared with rates from other ethnic groups, African Americans reported higher rates for blood pressure checks (except for Asian Americans) and mammogram tests. Rate for Pap tests were higher than corresponding rate for white adults in Nebraska. Cholesterol level checks (63.2 percent), were slightly lower than that for whites (66.0 percent).
- ❖ The proportion of African American mothers who received inadequate prenatal care though stabilized, still remains nearly three time (2.5) as high as the proportion of white mothers receiving inadequate prenatal care (*Table 17A*).
- ❖ Nearly 16 percent of African American (15.8) mothers report a high prevalence of cigarette smoking during pregnancy than Asian and Hispanic Americans. However, the rate for African American mothers nearly matches the white rate (15.1 percent) and is less than half the Native American rate (32.2 percent).
- ❖ The teen birth rate for African Americans slightly increased from 93.8 in 1993-1997 to 95.8 births per 1,000 girls in the current five-year period, but still remains about three times as high as the rate for white teenagers (*Figure 33*).
- ❖ Nonuse of seatbelts is slightly higher than the level as those for whites. Thirty percent of adults did “sometime/seldom” wear seat belts, while 8.3 percent “never” use seatbelts (*Figure 40*).
- ❖ The rate of binge drinking among African Americans (11.2 percent) is lower than rates for both Native Americans (28.2 percent), Hispanics (20.0) and whites (17.6 percent) (*Figure 43*).
- ❖ During 1999-2001, the age-adjusted asthma prevalence rate among African Americans (13.8 per 100,000 population) was more than twice higher when compared to whites (6.1).
- ❖ During 1998-2002, the asthma mortality rate for African Americans was 7.7/100,000 while they are approximately 4 times more likely than whites to die from asthma.
- ❖ Douglas and Sarpy Counties experienced a 27 percent increase in asthma deaths from 1990 to 1998 while the national rates remained relatively stable. From 1987 to 1999, 238 Douglas and Sarpy County residents died from asthma. Of those, 185 (77.7 percent) were white and 52 (21.8 percent) were African Americans.

Native Americans

- ❖ According to the U.S. 2000 Census, Native Americans number 14,896 or make up 0.9 percent of the total population of Nebraska.
- ❖ Although the proportion of Native Americans living in poverty decreased from 46.2 percent in 1990 to 33.0 percent in 2000, the rate is still higher than the rate for every other racial or ethnic group in Nebraska and is more than four times the rate for white Nebraskans (8.2 percent), according to data from the U.S. 2000 Census.

- ❖ During the period 1990 to 2000, Native American children under age 5 years experienced a 45.3 percent decrease in poverty rates from 67.1 to 36.7 percent while those aged 5-17 years also experienced a 23.3 percent decrease from 51.9 to 39.8 percent.

Access to Care

- ❖ During 1998-2002, 20.9 percent of Native American adults 18 and over, reported having no health insurance. By the same token, 14.7 percent self reported that they were unable to see a doctor due to cost in the past 12 months.
- ❖ The percent of Native American mothers who received first trimester prenatal care slightly increased to 65.8 percent for 1998-2002 from 64.1 percent in 1993-1997.
- ❖ Native American mothers reported the highest percentage (26.4) receiving inadequate prenatal care when compared with mothers from other racial/ethnic groups (Table 1). The proportion receiving inadequate prenatal care was close to three times as large as the proportion of white mothers (9.0) receiving inadequate prenatal care.

Health Status

- ❖ The proportion of Native American adults who rated their health status as either “fair” or “poor,” was 15 percent compared to 12 percent of white Nebraskans.
- ❖ Fifty-four percent of adult Asian Americans aged 65 years and older had ever had a pneumonia shot, according to the Nebraska BRFSS, 1998-2002.
- ❖ For 1998-2002, Native Americans lost 2.7 times as many years of potential life per 100,000 population (16,358.8) as whites (6,279.2) in Nebraska.
- ❖ Life expectancy, a general indicator of health status, is 67.9 years for all Native Americans, 65.6 for men, and 70.1 for women.
- ❖ Native Americans have experienced an increasing mortality rate due to heart disease (435.7/100,000). Relative risk of death due to heart disease has also shown a corresponding increase with Native Americans now reporting the highest mortality rate due to heart disease of any racial/ethnic group in the state. Native Americans are now 1.9 times as likely as white Nebraskans to die from heart disease.
- ❖ Native Americans report the highest mortality rate (81.8/100,000) due to cirrhosis of the liver of any racial/ethnic group in Nebraska (*Table 2, Table 28 and Figure 46*). Although the current rate has increased by 13.8 percent from the previous five-year period, the relative risk of mortality is 13.8 times as high for Native Americans as for whites in the state.
- ❖ Current relative risk of infection with a sexually transmitted disease is 5.6 times as high for Native Americans as for white Nebraskans.

- ❖ Native Americans reported the highest rate of diabetes-related deaths (345.8 per 100,000) of any racial/ethnic group in the state. Rates have increased and are now 4.9 times the rate for white Nebraskans.
- ❖ The relative risk of death (10.2) from homicides for Native Americans in Nebraska has also shown significant increase (191.4 percent) in the past ten years when compared to 3.5 in the previous five-year period, 1993-1997.
- ❖ Combined results of the 1988-2002 Nebraska Behavioral Risk Factor Surveillance System indicate that 28.2 percent of Native, participated in binge drinking (consuming five or more alcoholic drinks on one occasion).
- ❖ The incidence of HIV/AIDS among Native Americans in Nebraska has increased in the period 1998-2002 compared to the previous five-year period, with Native Americans now 5.4 times as likely as white residents to be diagnosed with HIV/AIDS (Table 33).
- ❖ The infant mortality rate for Native Americans has increased by nearly 53 percent from the previous five-year period's rate of 8.9 to a 1998-2002 rate of 13.6 deaths per 1,000 live births.
- ❖ Slightly over one-third of Native Americans (32.2 percent) women reported smoking during pregnancy.
- ❖ The teen birth rate (115.2/1,000 live births) for Native American (3.3 times) girls aged 15 to 19 is more than three times the rate for white teenagers.
- ❖ Post-neonatal mortality (deaths of infants between 28 days and one year of age) slightly increased for Native American babies, from 2.3 times the white rate in the previous five-year period to 3.3 during 1998-2002.
- ❖ The mortality rate for unintentional injuries among Native Americans (the third leading cause of death) declined slightly from the previous five-year period. However, Native Americans were still twice as likely as whites to die from unintentional injuries. Similarly, Native Americans were 1.9 times as likely as whites in the state to die as a result of injuries sustained in motor vehicle crashes.
- ❖ Native Americans are 13.6 times more likely to die from cirrhosis of the liver than whites.
- ❖ The YPLL rate due to cirrhosis per 100,000 population for Native Americans (1,384.5) has decreased, but was still nearly 14 times as high as the rate among white Nebraskans in 1998-2002.

Risk Factor Prevalence

- ❖ The percentage of Native American mothers receiving inadequate prenatal care based on the Kotelchuk Index decreased to 26.4 percent in the 1998-2002 period (Tables 3 and 17A). However, this figure is still 2.9 times the proportion of white mothers not receiving adequate care during pregnancy.

- ❖ More than one-third of Native American mothers (32.2 percent) smoked during pregnancy. This is more than twice the rate for white and African American mothers, and six to seven times the rates for Asian and Hispanic American women in Nebraska.

Asian Americans

- ❖ According to the U.S. 2000 Census, Asian Americans number 22,767 or accounts for 1.3 percent of Nebraska's total population.
- ❖ The 2000 poverty rate for Asian Americans (12.8) was 1.6 times more than the rate for whites (8.2) in Nebraska.

Access to Care

- ❖ Approximately 17 percent (16.9) of Asian Americans self-reported they have no health insurance, according to the Nebraska BRFSS, 1998-2002.
- ❖ The proportion of Asian Americans who had their cholesterol level checked in the past 5 years was 51.6 percent compared to 66 percent for whites.
- ❖ Compared to white (76.6 percent) women aged 18 and older, 64.5 percent of Asian women self-reported they had a Pap test in the past 2 years.
- ❖ There were about 10.6 percent of Asian American mothers who self-reported that they received inadequate prenatal care in 1998-2002, based on the Kotelchuk index, compared to 9.0 percent of white mothers in Nebraska (Table 1).

Health Status

- ❖ The proportion of Asian American adults who rated their health status as either "fair" or "poor," was 12.2 percent compared to 12 percent of white Nebraskans.
- ❖ Asian Americans fared better than white Nebraskans in terms of years of potential life lost. Asian Americans lost a little more than half as many years of potential life per 100,000 population (3,729.4) as white Nebraskans.
- ❖ Only 34 percent of adult Asian Americans aged 65 years and older had ever had a pneumonia shot, according to the Nebraska BRFSS, 1998-2002.
- ❖ In general, mortality rates among Asian Americans are lower than or comparable to the rates for white Nebraskans.
- ❖ The incidence rate of sexually-transmitted disease among Asian Americans has decreased by 60.0 percent in the period 1998-2002 compared to the previous five-year period and is currently 1.4 times the rate for whites in the state (*Table 2*).

- ❖ Although Asian Americans (152.6) had lower rates than whites, this group experienced a significant increase of 102.6 percent in heart disease mortality rate (from the rate of 74.0/100,000 in 1993-1997).
- ❖ In the five-year period, 1998-2002, cancer was the leading cause of death among Asian Americans. In the same period, cancer was the second leading cause of death among African Americans, Native Americans, and white Nebraskans.
- ❖ Infant mortality rate for Asian Americans was 5.0/1,000 live birth, during 1998-2002.
- ❖ The mortality rates due to unintentional injuries among Asian Americans was 32.3/100,000 during 1998-2002. This rate indicates a 129.0 percent increase from the previous rate of 14.1/100,000 during the period 1993-1997.
- ❖ Motor Vehicle mortality rate increased by 173.3 percent from the rate of 6.0/100,000 during the previous period 1993-1997 to 16.4/100,000 during the current five-year period, 1998-2002.
- ❖ The Asthma-underlying mortality rate for Asian Americans was 4.6/100,000, during 1998-2002

Risk Factor Prevalence

- ❖ The proportion of Asian American mothers who smoked during pregnancy was small, (4.9 percent), compared to 15.1 percent of white mothers (*Table 3*).
- ❖ The rate of births to girls aged 15 to 19 in the Asian community is very low (24.8 births per 1,000 females) when compared to rates for other racial/ethnic minority groups. The teen birth rate for Asian Americans in Nebraska is also lower than the rate for white adolescents (34.6).

Hispanic Americans

- ❖ Based on the U.S. Census 2000, Hispanic Americans make up the greatest share of the minority population in Nebraska, numbering 94,425 persons or 5.5 percent of the total population.
- ❖ The 2000 poverty rate for Hispanic Americans in Nebraska (20.4 percent) was more than double the rate for white Nebraskans (8.2 percent).

Access to Care

- ❖ During 1998-2002, 32.1 percent of adult Hispanic Americans in Nebraska had no health insurance, compared to only 9.1 percent of white Nebraskans (*Table 1*).
- ❖ Approximately 17 percent (16.5) of Hispanic adults state they were unable to see a doctor at some time in the past twelve months because of the potential cost of care.

- ❖ Only 58.0 percent of Hispanic Americans in the state had routine check up in the last 12 months.
- ❖ Nearly one-fourth of Hispanic American mothers reported receiving inadequate prenatal care, according to the Kotelchuk Index (21.3 percent), compared to 9.0 percent of white mothers in Nebraska.

Health Status

- ❖ Hispanic Americans in Nebraska self-rated their health status as either “fair” or “poor” 13.2 percent of the time, while 11 percent of whites rated their health this way.
- ❖ In 2001, 77.3 percent of Hispanic children 19 to 35 months of age received the 4:3:1 vaccine series which includes 4 or more doses of DTP (diphtheria and tetanus toxoids and pertussis vaccine), 3 or more doses of poliovirus vaccine, and 1 or more doses of any measles-containing vaccine (MCV).
- ❖ Sixty percent of adult Hispanics aged 65 years and older had ever had a pneumonia shot, according to the Nebraska BRFSS, 1998-2002.
- ❖ Hispanic Americans reported a 12.2 percent decrease in the years of potential life lost (YPLL) per 100,000 population in 1998-2002 (5,458.2) compared to the previous five-year period (6,215.4).
- ❖ The incidence of sexually transmitted diseases has increased sharply, with relative risk of infection rising to 3.4, more than triple the risk for whites.
- ❖ The incidence rate of diagnosed cases of HIV/AIDS per 100,000 among Hispanic Americans has increased by 33.3 percent for 1998-2002. Hispanic Americans in Nebraska are now 4.7 times as likely to contract HIV/AIDS as white residents (Table 2).
- ❖ During 1998-2002, cancer was the second leading cause of death among Hispanics at rate of 123.4 per 100,000. The heart disease mortality rate for Hispanics was 134.4/100,000, a 3.1 percent increase from the rate of 130.4 during the previous five-year period 1993-1997.
- ❖ Hispanic Americans experienced a 21.7 percent decrease in infant mortality, thus making Hispanic infants 1.1 times as likely as white infants to die within their first year of life.
- ❖ The unintentional mortality rate for Hispanic Americans has increased by 24.4 percent during the 1998-2002 period from the rate of 29.9 deaths per 100,000 during the previous period, 1993-1997.
- ❖ The motor vehicle fatality rate for Hispanic Americans remained stable, so that persons from this population group were only slightly more likely to die from motor vehicle crashes than white Nebraskans.
- ❖ The homicide rate for this population group has slightly decreased since 1993-1997. The homicide rate for Hispanic Americans is now 3.4 times the rate for white residents of the state.

- ❖ Diabetes-related mortality rates for Hispanic Americans has increased by 18.7 percent since 1993-1997. While the relative risk rate has slightly decreased for females, the relative risk rate for males increased by 45.5 percent during the 1998-2002 period.
- ❖ Hispanic Nebraskans are 2.5 times as likely to die from cirrhosis of the liver than whites in the state.

Risk Factor Prevalence

- ❖ The proportion of Hispanic American mothers who received prenatal care or care beginning after the first trimester has shown a slight improvement. In 1998-2002, 68.1 percent of all Hispanic mothers received prenatal care beginning in the first three months of pregnancy, compared to 65.4 percent in 1993-1997 (*Table 17A*).
- ❖ Based on Kotelchuk Index, during 1998-2002, 21.3 percent of Hispanic American mothers received inadequate prenatal care, compared to 24.2 percent in the previous period, 1993-1997. Thus Hispanic mothers were 2.4 times less likely than white mothers not to receive adequate prenatal care (*Table 17A*).
- ❖ Hispanic American women aged 40 and older are less likely than African American or white women in this age group to have ever received mammograms, although the majority (83.5 percent) in this age range did have this test done during 1998-2002 (*Figure 27*).
- ❖ A slightly greater proportion of Hispanic American women reported having a Pap test (77.3 percent) in the past two years than either Asian American or white women.
- ❖ During 1998-2002, the teen birth rate for Hispanic Americans (110.7), is 3.2 times the rate for white adolescents in the same age group (ages 15-19) (*Figure 33*).
- ❖ Prevalence rates for cigarette smoking for Hispanic Americans is somewhat side by side with the rate for white Nebraskans. However, Hispanics experienced higher rates for obesity (22.0 percent), no leisure-time physical activity (35.6), (*see Table 3*), and nonuse-of-seatbelts (25.9), (*Figure 40*). Prevalence of binge (20.0 percent) (*Figure 43*) and heavy drinking (8.4 percent) (*Figure 46A*) among Hispanic Americans were higher than the rates for white Nebraskans.
- ❖ The prevalence of asthma among Hispanic Americans 18 years of age and older was 4.7 percent according to the combined results of the Nebraska 1999-2001 BRFSS.

METHODOLOGY

The study period for this Health Status of Racial and Ethnic Minorities in Nebraska Report is from 1993 to 2002 divided into two five-year periods of 1993-1997 and 1998-2002 for comparability. Data was collected through the Nebraska, and the U.S. Behavioral Risk Factor Surveillance System (BRFSS), the Nebraska and U.S. Vital Statistics Records, and where applicable, from the Nebraska Minority Behavioral Risk Factor Surveillance Survey (MBRFSS). The BRFSS is a measure of the health characteristics in terms of health behavior and risk factors associated with health. Percentages and rates (prevalence/incidence, mortality, relative-risk and YPLL rates) were used for descriptive analysis. The age-adjusted death rates and all other rates were calculated using five years of mortality and similar data, and the combined populations for the same five years. Therefore mortality and all other rates in this report have been age-adjusted to the 2000 standard age distribution of the U.S. population to eliminate changes and differences in age composition of the population.

The findings in this report are based on age-adjusted death rates that change as the age distribution of the state's population changes. Age-adjusted rates indicate changes in the risk of death more effectively than crude rates. Age-adjusted rates are also better indicators for comparisons of mortality by sex or racial subgroups.

In addition, the racial and ethnic minority classifications used for purposes of analysis may be extremely heterogeneous. For example, while most Native Americans in Nebraska are American Indians, there may be significant differences in health status among the various tribes. Similar differences may also exist among groups of persons classified as African Americans (and recent African immigrants from various African nations), Hispanic/Latino Americans, or Asian and Pacific Islanders.

The definitions for causes of death follow the Tenth Revision of the International Classification of Disease from 1999-2002. The Ninth revision was used in 1998. Although all other definitions are found at the end of this report under *Glossary of Terms and Abbreviations* however, there are two terms that are used frequently in this report that require foremost definition here. One is "relative risk" and the other is "years of potential life lost."

In this report, the disparity in health between Nebraska's racial/ethnic minority and majority populations is determined by the measure of **relative risk**. Therefore, for each health status indicator discussed, relative risk is defined as follows:

Relative Risk = $\frac{\text{Age-Adjusted Mortality Rate (or Incidence) of Minority Population}}{\text{Age-Adjusted Mortality Rate (or Incidence) of White Population}}$

A value of 1.0 indicates that the racial/ethnic minority population has a rate equal to that of the white population. A relative risk of less than 1.0 means that the minority population is less likely than the white population to die of or develop a particular type of disease. If the relative risk is greater than 1.0, the minority population suffers proportionally more illness or deaths from this condition than the white population. Relative risk calculations, along with morbidity and mortality rates, are presented for eleven important health problems for each racial/ethnic minority group (African Americans, Hispanic/Latino Americans, Native Americans, and Asian

Americans/Pacific Islanders). In cases where the number of deaths for a particular cause is extremely small, mortality rates and relative risk are not shown.

Years of potential life lost (YPLL) are also presented for leading causes of death. This indicator is a measure of premature death. In the calculation of YPLL, using 75 productive years of life as the basis, infants who die before their first birthday have lost 74.5 years of life; a person dying at age 50 years has lost 25 years of life. Therefore, the younger the age of the person at death, the more years of potential life are lost.

DATA LIMITATIONS

Operationally, the term “racial and ethnic minority” is generally used throughout this report. However, the term “minority” may also be used to refer to persons who are members of racial or ethnic minority groups. When reading this report, keep in mind that Nebraska data on racial/ethnic minority health status are limited. Since the number of persons in minority population groups is relatively small in comparison to the total population of the state, rates for a particular disease may be based on a very small number of cases and may not be reported in this document. To increase the number of cases in these categories, rates have generally been calculated using five years of combined data.

In addition, the racial and ethnic minority classifications used for purposes of analysis may be extremely heterogeneous. For example, while the four federally recognized Native Americans tribes— (Omaha, Santee Sioux, Winnebago and Ponca) in Nebraska are American Indians, there may be significant differences in health status among the various tribes. Similar differences may also exist among groups of persons classified as Hispanic Americans, or Asian and Pacific Islanders, Indians and Parkistanis, Iraqis, Iranians as well as new immigrants from other Middle Eastern countries and former Soviet Union. Thus, risk factor prevalence data may be limited for Asian American/Pacific Islander, and Native American population.

It is equally necessary to keep in mind that disparities in income levels, educational attainment, and problems in getting access to health care may greatly influence variations between racial or ethnic groups and within them, as well.

Another limitation is that currently, there is no clear separation of African Americans from recent African immigrant or refugee populations coming to Nebraska from countries such as Nigeria, Kenya, Sudan, Ethiopia, etc. Rather all populations are grouped under the category *African Americans*. The challenge created by this omission is that the diversity within and between populations arising in Africa, as well as the differences between recent arrivals to African American and differences among African Americans, cannot be distinguished. Each population may have their own unique health issues and needs which should be considered when designing health interventions.

There is no state appointed *Refugee Health Coordinator* whose responsibility it is to coordinate the health needs and challenges of Nebraska’s Refugee Camps found across the state. As such, relevant refugee health data for adequate policy and decision-making purposes are lacking.

Data from the 2002 Minority Behavioral Risk Factor Survey (MBRFS) are not yet available for use in this report. Since risk factor prevalence data are important in discussing the health of population groups, data from the 2001 Minority Behavioral Risk Factor Survey (MBRFS) was combined with the 1998-2002 Nebraska Behavioral Risk Factor Surveillance System (BRFSS). The Nebraska BRFSS is not adequate in assessing risk in the state's minority populations because the sample size is insufficient for smaller racial and ethnic minority groups. Even when combining multiple data years, the numbers of Asian American and Native American respondents are too small to allow meaningful analysis.

Another limitation is the non-inclusion of *comparability ratios* between ICD-9 and ICD-10. Beginning in 1999, the Tenth Revision of the International Classification of Disease (ICD-10) was released and adopted for classifying causes of death. While allowing for more accurate classifications, this made it difficult to compare data coded with the ICD-9 (used for years 1979-1998) to data coded with the ICD-10 (1999 to present). To overcome this difficulty, the federal government developed and released comparability ratios that were designed to account for changes in disease coding. However, when applying these comparability ratios, the outcome is often a change (either an increase when the ratio is greater than 1.0 or a decrease when the ratio is less than 1.0) in the number of deaths and death rate for data coded under the ICD-9. In the light of the above it was decided not to apply any comparability ratios to data coded under the ICD-9. It is therefore appropriate to bear this in mind when analyzing all trends within this report in which data prior to 1999 is compared to data post 1998. As is shown on Table 37A, national immunization coverage data for Nebraska is lacking because sample sizes for African Americans, Native and Asian Americans were too small for any coverage estimates to be made.

RESULTS AND DISCUSSION

DESCRIPTION OF NEBRASKA'S RACIAL/ETHNIC MINORITY POPULATIONS

According to the U.S. Census Bureau, the total population in the State of Nebraska was 1,647,657 in 1996; 1,666,028 in 1999, and 1,711,263 in 2000. Between 1990 and 2000, the white population increased by approximately 3.6 percent and the total Nebraska population increased by 8.4 percent. From 1990 to 2000, Nebraska's racial/ethnic minority population grew from 119,205 to 200,629 a 68.3 percent increase. Based on the 2000 U.S. Census data, racial and ethnic minorities comprise approximately 12.0 percent of Nebraska's total population. Hispanic Americans comprise 5.5 percent of the population, making them the largest minority group in the state. Between 1990 and 2000, the population of non-white Hispanic, grew from 2,732 in 1990 to 55,658 in 2000. African Americans now make up about 4.0 percent of the population making them the second largest minority group in the state. Nebraskans who were identified as Native Americans make up about 0.9 percent, while Asian Americans account for 1.3 percent of the population of Nebraska (Table 4).

Over the last five years, Nebraska has seen a substantial increase in new immigrant population. It's been unofficially estimated that more than 50 percent of all Sudanese population in the U.S. are resident in Nebraska. Following this, it's believed that Sudanese in Omaha number anywhere from 5,000 to 7,000, over 1,000 in Lincoln and nearly 1,000 each in Bellevue and Norfolk. The size of the racial/ethnic minority population in Nebraska is believed to be underestimated particularly for Hispanics, Refugees from Sudanese and other new immigrants. The mobility of this segment of the population, particularly migrant workers and their families, as well as the presence of an undetermined number of undocumented workers makes it difficult to arrive at an accurate number. Likewise, the number of Asian Americans, Russians, Iraqis, Iranians, India and Parkistanis, Sudanese (mainly the Nuers of Southern Sudan, Dinka, Shilluk, Nubans/Nubians, Acholle, Maban, Murle and Anyuak) and others in Nebraska may also be underestimated to some extent, as a result of the influx of recent immigrants.

Trends

Between 1990 and 2000, the population of Nebraska increased by 8.4 percent from 1,578,385 to 1,711,263, and the number of Nebraskans who identified themselves as white increased by about 3.6 percent (i.e., from 1,480,558 in 1990 to 1,533,261 in 2000). In comparison, racial and ethnic minority populations increased by 68.3 percent from 119,205 in 1990 to 200,629 in 2000. The number of minority residents in each of the racial and ethnic categories experienced substantial growth. The largest minority group in the state now is the Hispanics which experienced a substantial amount of growth in population from 36,969 in 1990 to 94,425 in 2000 (a 155.4 percent increase). Within the Hispanic population, non-white Hispanics in Nebraska who numbered 2,732 in 1990 grew by an outstanding 1,937.3 percent to a total of 55,658 in 2000. One reason to explain this large increase in population may be as a result of large new Hispanic immigrants drawn by the meat packing industry found in the state. Another possible reason could be because of coding "other race" as non-white Hispanic instead of white. The reason for the large increase is not apparent. Whatever the reasons are, there is a growing number of Hispanics or Latinos in other central Nebraska Counties as well.

During the same period, 1990 to 2000, although the number of African American residents showed a fairly large increase from 57,404 in 1990 to 68,541 in 2000 (19.4 percent growth), this community is no longer the largest minority group according to the 2000 U.S. Census data.

Native Americans and Alaskan Natives account for 0.9 percent of Nebraska's total population for a total of 14,896, having grown by 20 percent from a total of 12,410 in 1990. The Asian American population increased by about 83.3 percent from 12,422 in 1990 to 22,767 in 2000 (*Table 4*). This increase in growth may be attributable to recent and constant new immigrants from Asia within the ten-year period.

The U.S. Census Bureau forecasts continued strong growth in the Hispanic American (mostly Mexicans) and Asian American (mostly, Vietnamese) segments of Nebraska's population by the year 2025 (*Figure 1*). It is estimated that the number of Hispanic Americans in the state will reach approximately 145,000 by 2025, nearly double (+99%) the 1998 population.

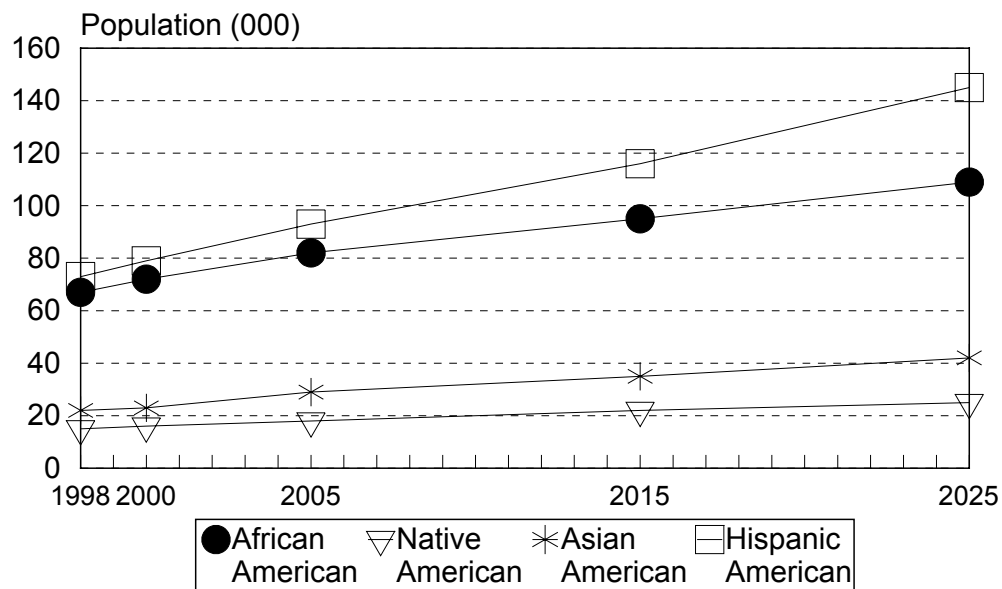
Table 4
Growth in Nebraska's Population
By Racial and Ethnic Group*
1990 vs. 2000

	1990	2000	Percent Change
Nebraska Total	1,578,385	1,711,263	8.4
White	1,480,558	1,533,261	3.6
African American	57,404	68,541	19.4
Native American	12,410	14,896	20.0
Asian American	12,422	22,767	83.3
Hispanic American	36,969	94,425	155.4
Hispanic Non-White	2,732	55,658	1,937.2
Total Minority	119,205	200,629	68.3
* Racial and Ethnic Minority populations do not include the number of who checked "multiple race" on the census forms. SOURCE: 2000 U.S. Census and 1990 U.S. Census Data			

The number of Asian Americans will reach about 40,000 by 2025, an increase of 90 percent over 1998 totals. Numbers of African and Native Americans are also expected to increase considerably by 2025.

The African American population is projected to grow by 63 percent (109,000 people), while an increase of 67 percent is predicted for Nebraska's Native American community (25,000 people by 2025). By contrast, the white population is projected to grow just 10 percent over this time period.

Figure 1
Projected Growth in Nebraska's Population
by Race and Ethnic Origin



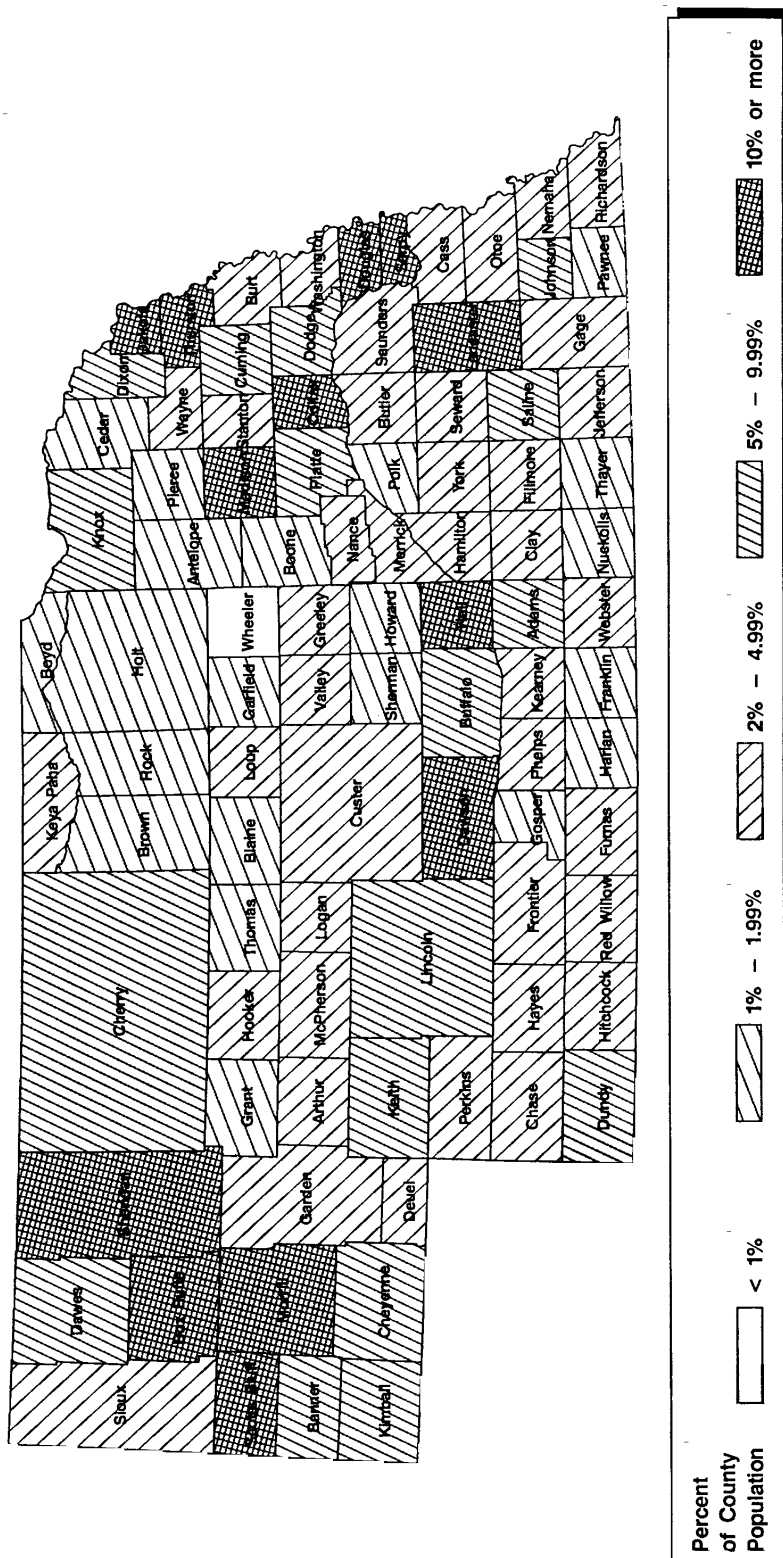
NOTE: Hispanic projections have been recalculated by applying projected percent changes to 1998 Census population estimates.
SOURCE: U.S. Census projections.

Geographic Location

The following maps below are based on "all who checked" a given race, so these figures add to more than 1,711,263. The idea was to include the multi racial Nebraska residents. There were about 24,000 multi racial Nebraska residents in the 2000 census. They are counted in every map (*Figures 2-6*). When doing age adjustment, the total number who checked a single race were those included. So these totals add to no more than 1,711,263. The majority of the state's racial/ethnic minority population (66.9 percent), live in the three largest counties: Douglas, Lancaster, and Sarpy (*Figure 2*).

Only about four percent of the state's African American population lives outside these three counties, with 86 percent of the total residing in the Omaha metropolitan area (*Figure 3*). Though many of Nebraska's Native Americans live on reservations, the majority of them do not (*Figure 4*).

Nebraska U.S. Census, 2000 Percentage of County Minority Population



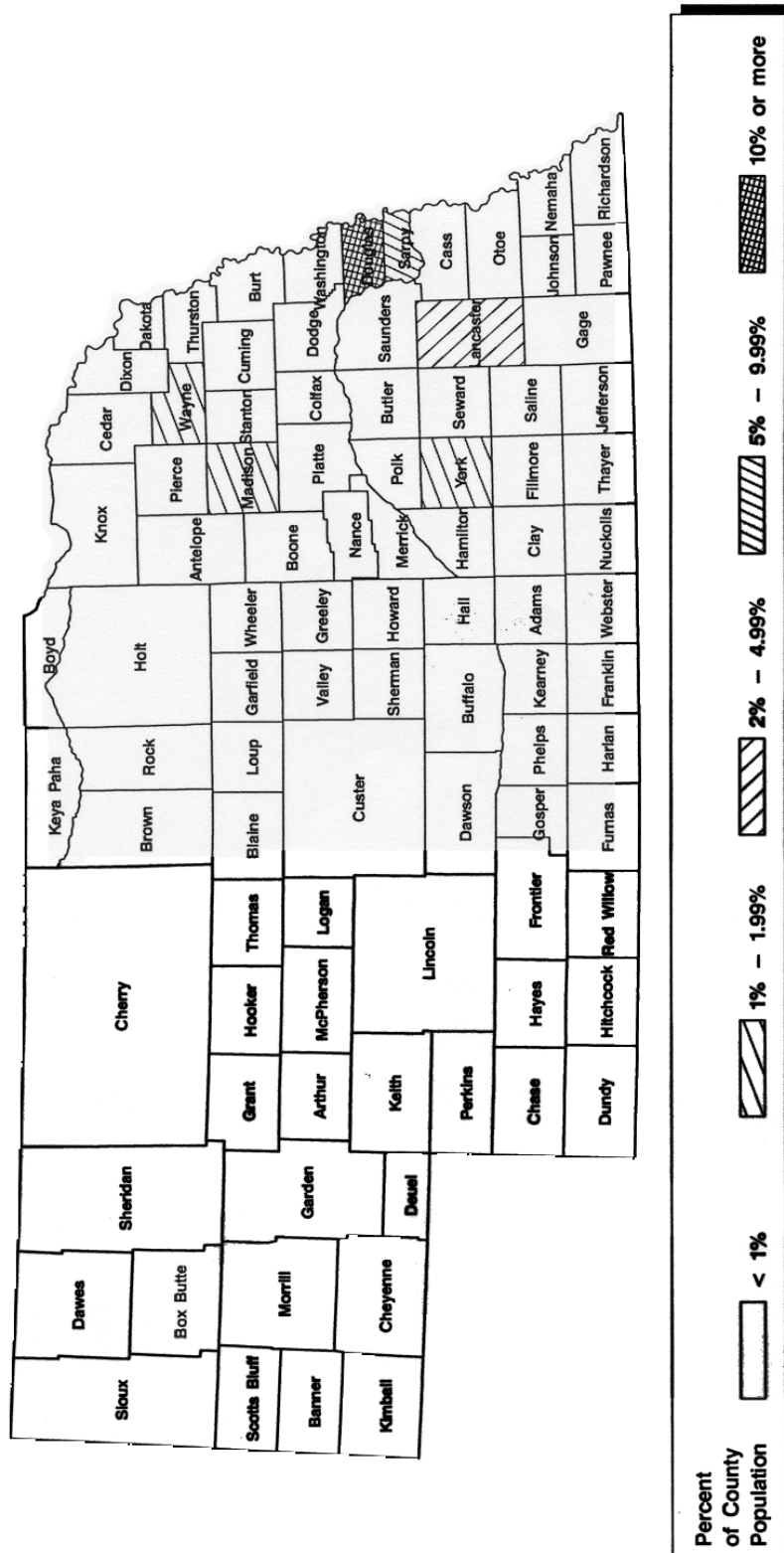
Total Nebraska Minority Population = 216,769
12.7% of State Population (1,711,263)

Minority Population = Total Population - White Not Hispanic Population

Figure 2
Nebraska Counties With Large Race/Ethnic
Minority Population

Nebraska U.S. Census, 2000

Percentage of County African American Population



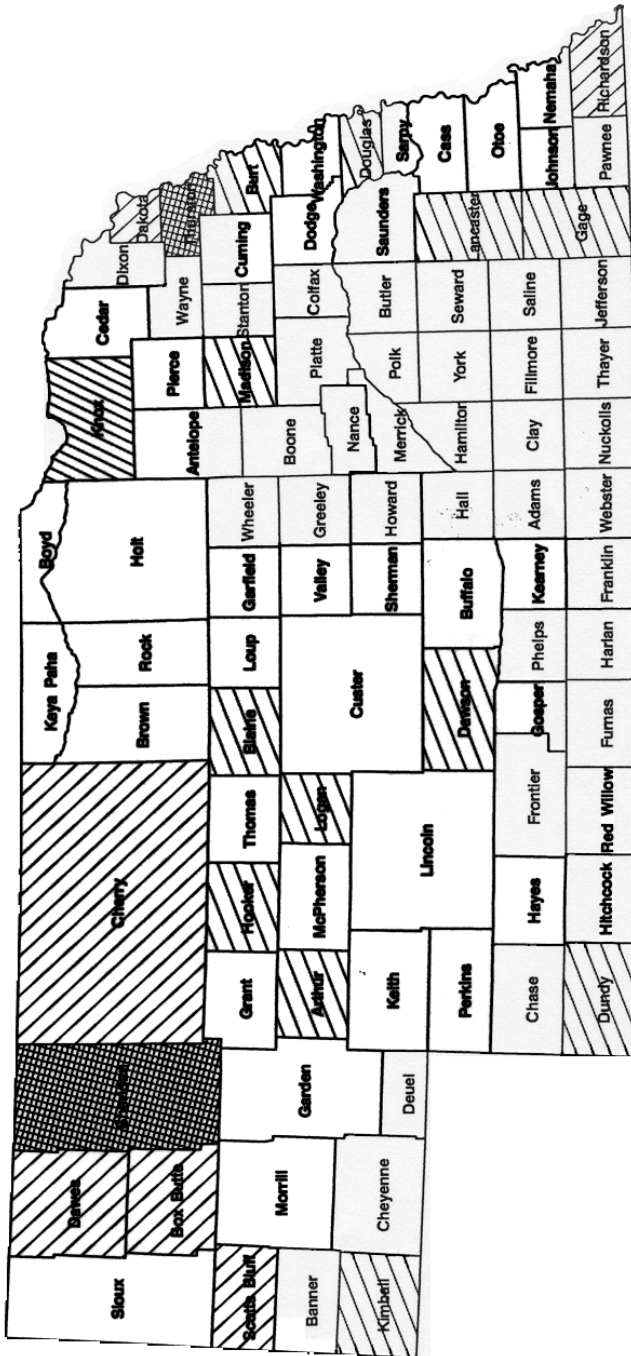
Total Nebraska African American Population = 75,833
 4.4% of State Population (1,711,263)

(Includes the 7,292 African Americans who checked more than one race in the 2000 Census)

Figure 3
 African American Population of Nebraska Counties
 As Percent of Total County Population

Nebraska U.S. Census, 2000

Figure 4



Total Nebraska Native American Population = 22,204
1.3% of State Population (1,711,263)

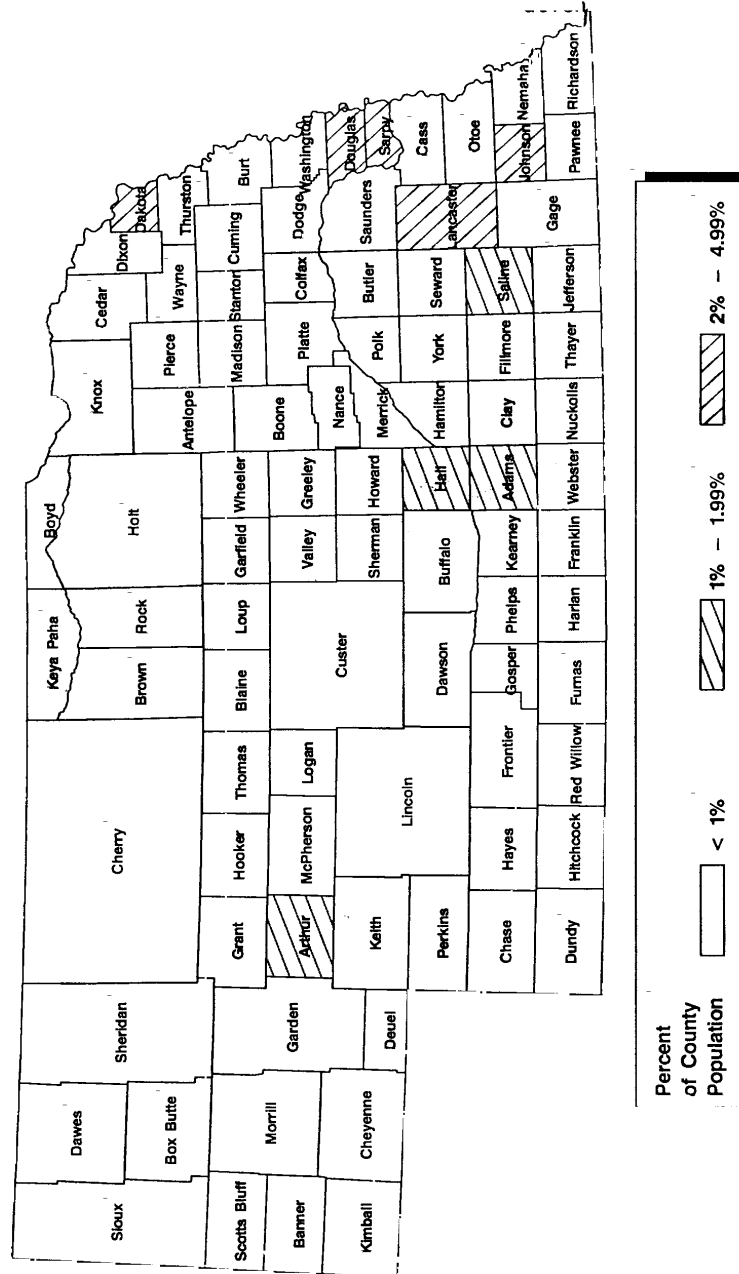
(Includes the 7,308 Native Americans who checked more than one race in the 2000 Census)

The urban areas of Omaha and Lincoln accounted as much as 37 percent of the state's Native American population, although native people make up only a small proportion of these counties' total populations. A sizeable community also exists in the northwestern part of Nebraska adjoining the Pine Ridge and Rosebud Reservations in South Dakota. Among the state's four reservations, the Winnebago and Omaha reservations located in Thurston County, account for 22 percent of Nebraska's Native American population. An additional 3 percent reside at the Santee Indian Reservation in Knox County. The Iowa and the Sac and Fox Indian Reservations on the Nebraska-Kansas border account for about 1 percent of Nebraska's Native American's total population.

About three-fourths of Asian Americans/Pacific Islanders (76 percent) (*Figure 5*), as well as about half the Hispanic American population (53 percent) (*Figure 6*), also live in Nebraska's three metropolitan counties.

Nebraska U.S. Census, 2000 Percentage of County Asian American Population

Figure 5
Asian American Population of Nebraska Counties
As A Percent of Total County Population



Total Nebraska Asian American Population = 28,542
1.7% of State Population (1,711,263)

(Includes the 4,878 Asian Americans who checked more than one race in the 2000 Census)

**Nebraska U.S. Census, 2000
Percentage of County Hispanic/Latino Population**



With the availability of employment for migrant workers, the Hispanic population in the western part of Nebraska has increased substantially. According to the 2000 U.S. Census estimates, 17.2 percent of the Hispanic American population resides in Scotts Bluff County. However, because meat-packing plants in several Nebraska counties continue to attract large number of Hispanic American workers, other minority populations and their families from outside the state, this proportion is probably changing. Dawson, Colfax, Cuming, Dakota, Hall, Madison, and Platte counties have also experienced increases in their Hispanic American populations because of this industry. The majority of Nebraska's new immigrants, specifically Sudanese, are mostly found in Omaha, Lincoln, Bellevue, Grand island and Norfolk.

Age Distribution

Racial or ethnic minority residents are more likely than white Nebraskans to be under age 25 (*Table 5*).

Table 5
Distribution of Nebraska's Population by Age
And Racial/Ethnic Group (2000)

Age	% of Total Population	% of White Population	% of African American Population	% of Native American Population	% of Asian American Population	% of Hispanic American Population
< 1 Year	1.4	1.3	1.8	2.1	1.7	2.9
1-4	5.5	5.0	7.6	8.4	6.4	10.7
5-14	14.8	14.1	20.2	18.9	14.0	20.5
15-24	14.9	14.4	17.5	18.9	19.2	20.1
Under 25	36.6	34.8	47.1	48.3	41.3	54.2
25-34	13.1	12.5	14.7	15.4	24.4	20.0
35-44	15.4	15.6	15.4	13.7	14.0	12.9
45-54	13.2	13.7	10.5	9.5	10.8	6.9
55-64	8.3	8.7	5.8	5.0	5.8	3.1
65-74	6.8	7.2	3.9	2.7	2.6	1.8
75-84	4.8	5.2	1.8	1.3	1.1	0.8
85+	2.0	2.2	0.7	0.4	0.2	0.2
35 and Older	50.5	52.6	38.1	32.6	34.5	25.7
All Ages	1,171,1263	1,533,261	68,541	14,896	22,767	94,425

SOURCE: U.S. Census Data, 2000

Close to one-half of all African Americans, Native Americans, Asian Americans, and Hispanic Americans in Nebraska fall into the under age 25 bracket compared to 34.8 percent of white Nebraskans in this age group in 2000. Only one-third of all racial/ethnic minority residents in the state were aged 35 or older. Hispanic Americans in this age category constitutes 25.7 percent while more than one-half of white Nebraskans (52.6 percent) fell into this age category.

According to the 2000 U.S. Census, children under age 18 made up of 26.3 percent of Nebraska's population (a total of 450,242 children) (*Table 5A*). Among the white population of the state, children under age 18 accounted for one-fourth of all residents (25.0 percent). Among racial and ethnic minorities, the proportion of children in the population was larger: 39.9

percent for Native Americans, 39.4 percent for Hispanic Americans, 35.3 percent for African Americans and 28.3 percent for Asian Americans in comparison to whites (25 percent).

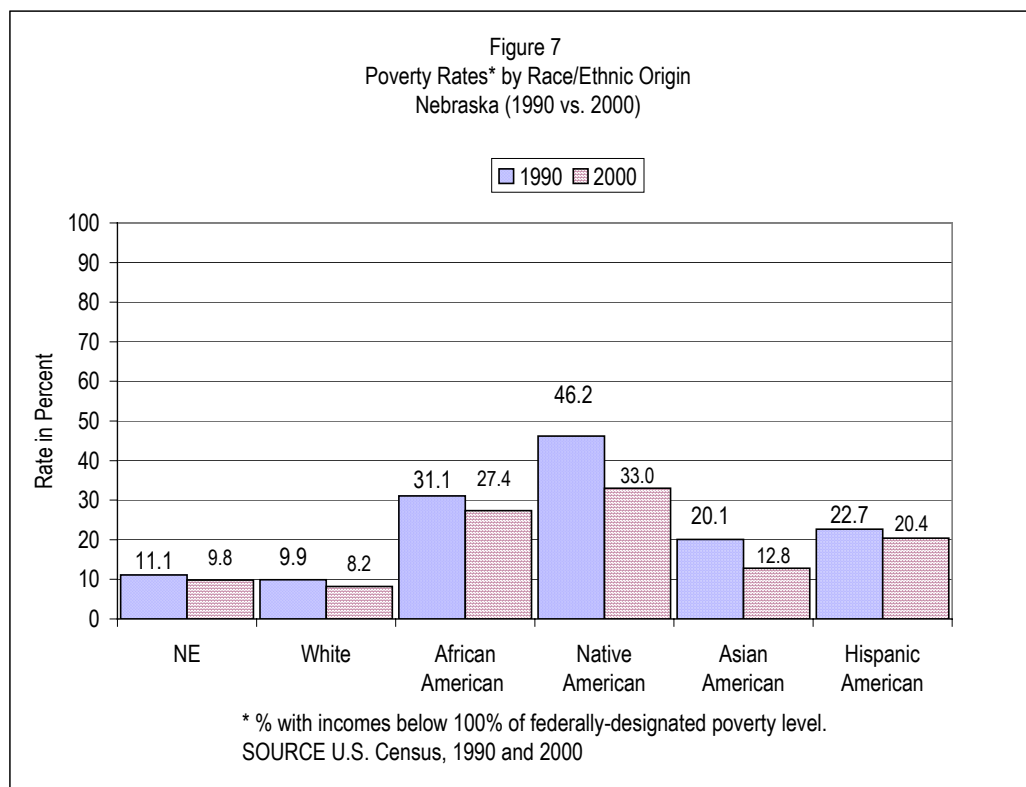
SOCIOECONOMIC STATUS

Nebraska's racial and ethnic minority groups are disproportionately represented in the lower income categories. Overall, during 1990-2000, poverty rates declined for all racial and ethnic groups in Nebraska. Among the minority groups, poverty rates declined in this order: Asian Americans (-36.2 percent), Native Americans (-28.6 percent), African Americans (-12.0 percent); and Hispanics (-10.1 percent). White Nebraskans also experienced a 17.2 percent reduction in poverty rate from the 1990 level

Table 5A
Distribution of Nebraska's Total Population
Children (0-18) by Race and Ethnic Group
(2000)

AGE/RACIAL OR ETHNIC GROUP	TOTAL		MALE		FEMALE	
	#	%	#	%	#	%
Total Population	1,711,263		843,351	49.3	867,912	50.7
0 – 17 Years	450,242	26.31	230,386	13.5	219,856	12.9
18 Years +			612,965	35.8	648,056	37.9
White	1,533,261	89.6	752,674	49.1	780,587	50.9
0 – 17 Years	383,277	25.0	196,429	12.8	186,848	12.2
18 Years +	1,149,984	75.0	556,245	36.3	593,739	38.7
African American	68,541	4.0	33,878	49.4	34,663	50.6
0 – 17 Years	24,189	35.3	12,322	18.0	11,867	17.3
18 Years +	44,086	64.3	21,560	31.5	22,526	32.9
Native American	14,896	0.9	7,303	49.0	7,593	51.0
0 – 17 Years	5,940	39.9	3,028	20.3	2,912	19.5
18 Years +	8,956	60.1	4,275	28.7	4,681	31.4
Asian American	21,931	1.3	10,549	48.1	11,382	51.9
0 – 17 Years	6,215	28.3	3,280	15.0	2,935	13.4
18 Years +			7,678	35.0	8,447	38.5
Hispanic American	94,425	5.5	51,438	54.5	42,987	45.5
0 – 17 Years	37,218	39.4	19,253	20.4	17,965	19.0
18 Years +	55,747	59.0	31,976	33.9	23,771	25.2
SOURCE: U.S. Census Data, 2000.						

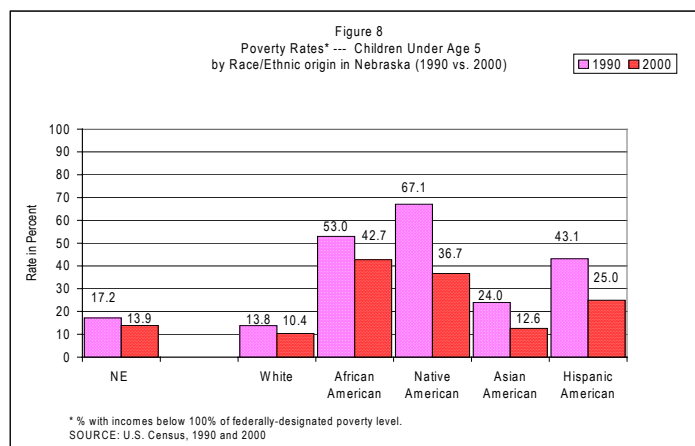
Nevertheless, according to the 2000 U.S. Census, the poverty status of Nebraska residents living in households with incomes below 100 percent of the federally-designated poverty level was 33.0 percent for Native Americans, 27.4 percent for African Americans, 20.4 percent for Hispanics and 12.8 percent for Asian Americans. By comparison, just 9.8 and 8.2 percent of all Nebraskans and whites lived in poverty (*Figure 7*).

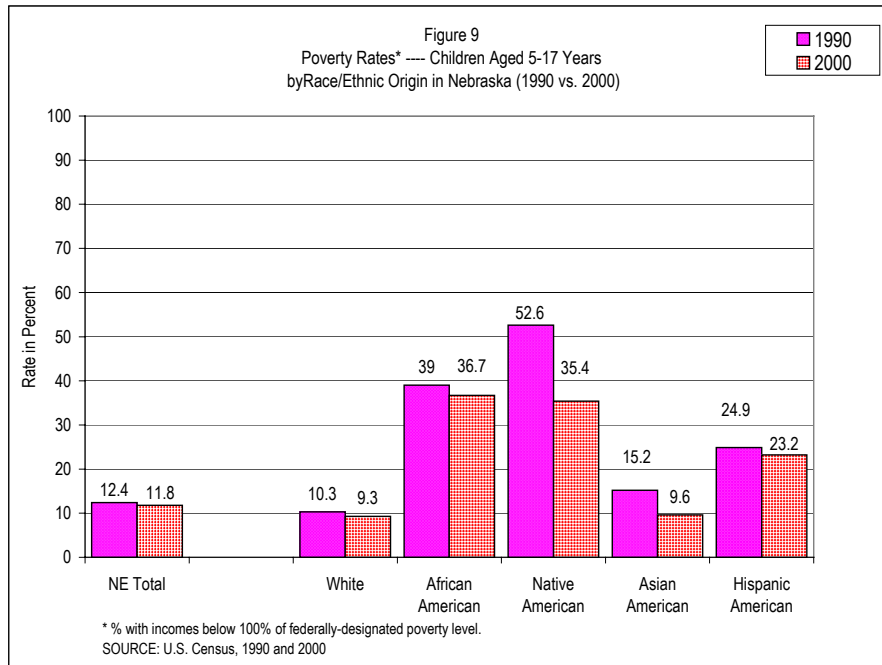


Although significant reductions in poverty rates were experienced by all, differences in poverty rates between whites and racial/ethnic minority residents of Nebraska remained particularly striking for households with children. For children under 5 years of age, the proportion living in households with incomes below 100 percent of poverty in 1990 ranged from 12.6 percent for Asian Americans to 42.7 percent for African Americans, compared to 10.4 percent of white children this age.

However, Native American households with children under 5 years of age, experienced a tremendous reduction in poverty rate from its 1990 level of 67.1 percent to the current 2000 rate of 36.7 percent (*Figure 8*).

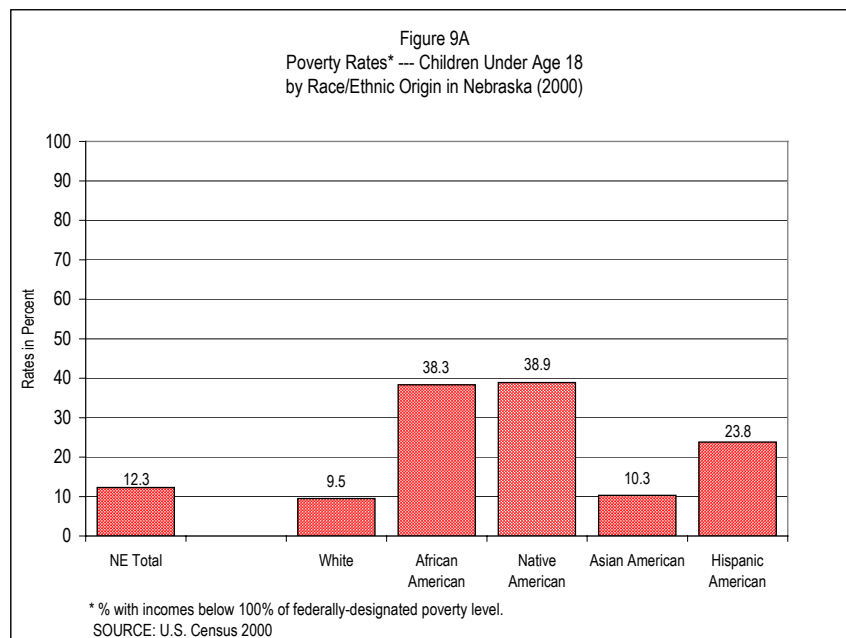
In 2000, there was a general decrease in poverty rates for all racial and ethnic groups in Nebraska. Among older children aged 5 to 17, approximately one in ten white children (9.3 percent) live in poverty, compared to 10.3 percent in 1990. Rates for minority children in this age group ranged from 9.6 percent for Asian Americans, 23.2 percent for Hispanic Americans, and 36.7 percent for African Americans to 35.4 percent for Native Americans (*Figure 9*).





During the period 1990 to 2000, Native American children aged 5-17 years experienced a 23.3 percent decrease in poverty rates from 51.6 to 39.8 percent.

Overall, for all children under 18 years of age, the proportion of minority children living in households with incomes below 100 percent of poverty in 2000 ranged from 10.3 percent for Asian Americans, 23.8 percent for Hispanics, 38.3 for African Americans to 38.9 for Native Americans, compared to 9.5 and 12.3 percent for white and Nebraska children this age (*Figure 9A*).



ACCESS TO HEALTH CARE

According to the *Center for Studying Health System Change (CSHSC)*, disparities in access to medical care among working-age racial and ethnic minority Americans has failed to improve from 1997 to 2001, despite a booming economy and increased national attention to narrowing or eliminating minority health disparities. Particularly African Americans and Latinos continue to have less access to regular health care provider, or see a doctor, and are less often without health insurance compared to whites, and are behind whites in seeing specialists, (Center for Studying Health System Change, 2002). Again, “due to the rising costs associated with health care, employers, government and other third party payers have started to cut back on what they spend...many Ethnic-Americans do not have access to health care due to the fact that under the standards Ethnic-Americans are sicker than European Americans. Since they are sicker, Ethnic-Americans cost more to treat,” and more to be covered. Even if an Ethnic-American can obtain treatment, they may not receive the highest quality treatment available,”(Randall 1994, p. 224).

For racial and ethnic minority populations with limited financial resources, general feelings of hopelessness, powerlessness and low level of self-esteem also make it more difficult for the poor to seek health care services. Language and cultural differences between health care providers and recipients from different ethnic backgrounds often make communication difficult. The communication gaps may also prevent the receipt of care that is appropriate to their needs when they do visit a health care provider. These difficulties are particularly acute for persons who do not speak English as their primary language. In general, low-income and racial/ethnic minority families are affected more severely than other segments of the population by language and cultural barriers, contributing to the excess morbidity and mortality these groups already experience.

According to CSHSC, uninsured whites have greater financial resources, which may explain why they have fewer problems accessing care. It will be difficult to eliminate disparities in minority health care without first eliminating these gaps in minority health insurance. Availability of health care professionals who are culturally competent and have needed linguistic skills can greatly enhance the effectiveness of the health care that these patients receive.

In order to improve the health of racial and ethnic minorities and other underserved populations in Nebraska, it will be imperative to improve access to primary care and increase the use of preventive services. Preventive services include procedures such as immunizations, screening for early detection of diseases (such as cancer and diabetes) or risk factors (such as elevated blood cholesterol levels), and patient counseling. Also needed are more healthcare professional who are of racial and ethnic minorities.

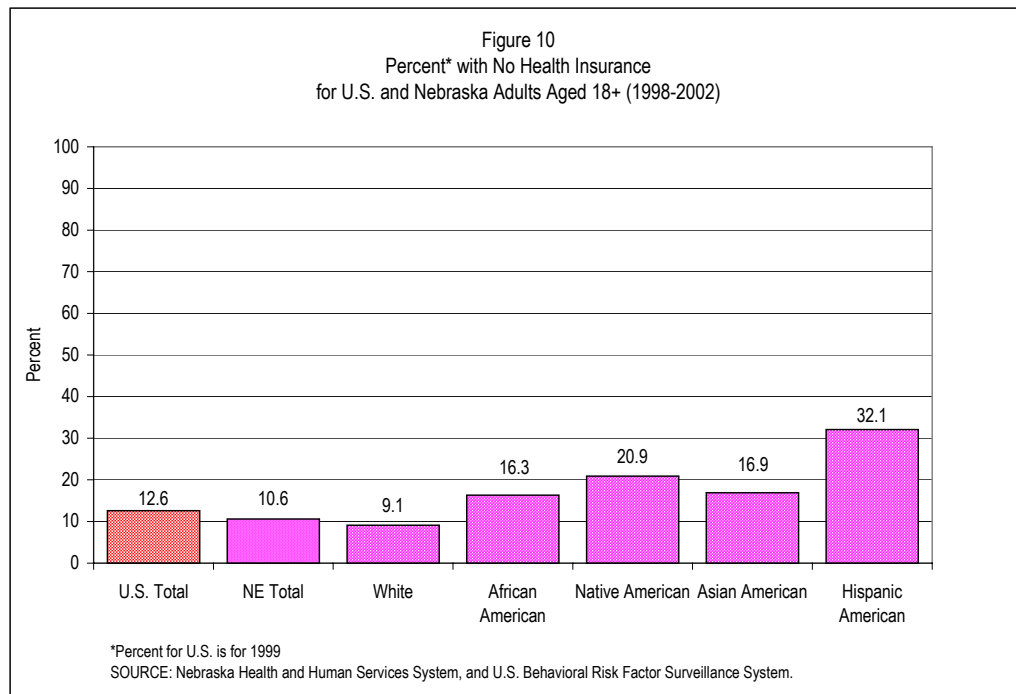
Health Insurance

Racial and ethnic minority populations in Nebraska are much more likely to be without health insurance than whites. According to the 1998-2002 Nebraska Behavioral Risk Factor Surveillance System (BRFSS), approximately 10.6 percent of all Nebraska adults aged 18 and older reported they had no health care plan or insurance.

During the five-year period 1998-2002, 9.1 percent of Nebraska whites had no health insurance while 32.1 percent of Hispanics, 20.9 percent of Native Americans, 16.3 percent of African Americans and 16.9 percent of Asian Americans were uninsured. Nationally, 12.6 percent of U.S. residents were uninsured (*Figure 10*).

Several reasons may account for the rather high number of the uninsured minority populations. With a limited number of Asian and Native Americans in the population, the inherently small sample size of participants on this survey may have affected these estimates of who may be more likely to be uninsured could have caused an increase in the number and proportion of the uninsured. Other factors may include a lack of employers covering health care for Hispanics or high cost health care for the employer or high cost health care for employees. However, it may also be that the recording system could have improved during the last five years, making available data more accurate.

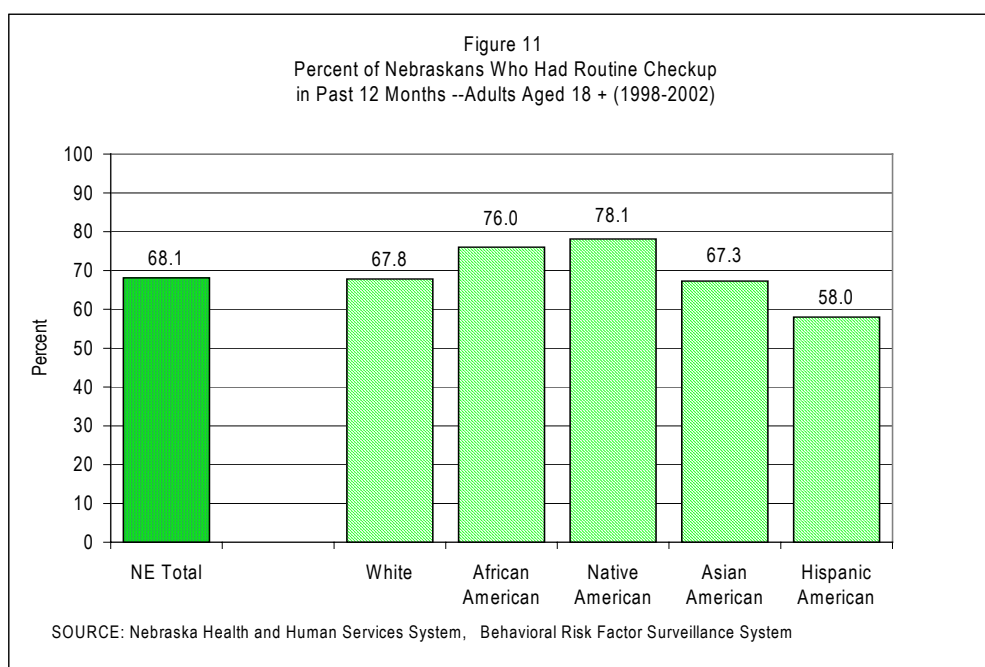
Overall, the proportion of the adult population who are uninsured is higher for racial/ethnic minorities in Nebraska compared to the population in general. Although most Nebraska residents and workers have some kind of health care plan, not everyone with health insurance carries adequate coverage. Inadequate health insurance may also serve as a barrier to the receipt of needed health care, particularly for persons with low to moderate incomes.



Utilization of Preventive Health Care Services

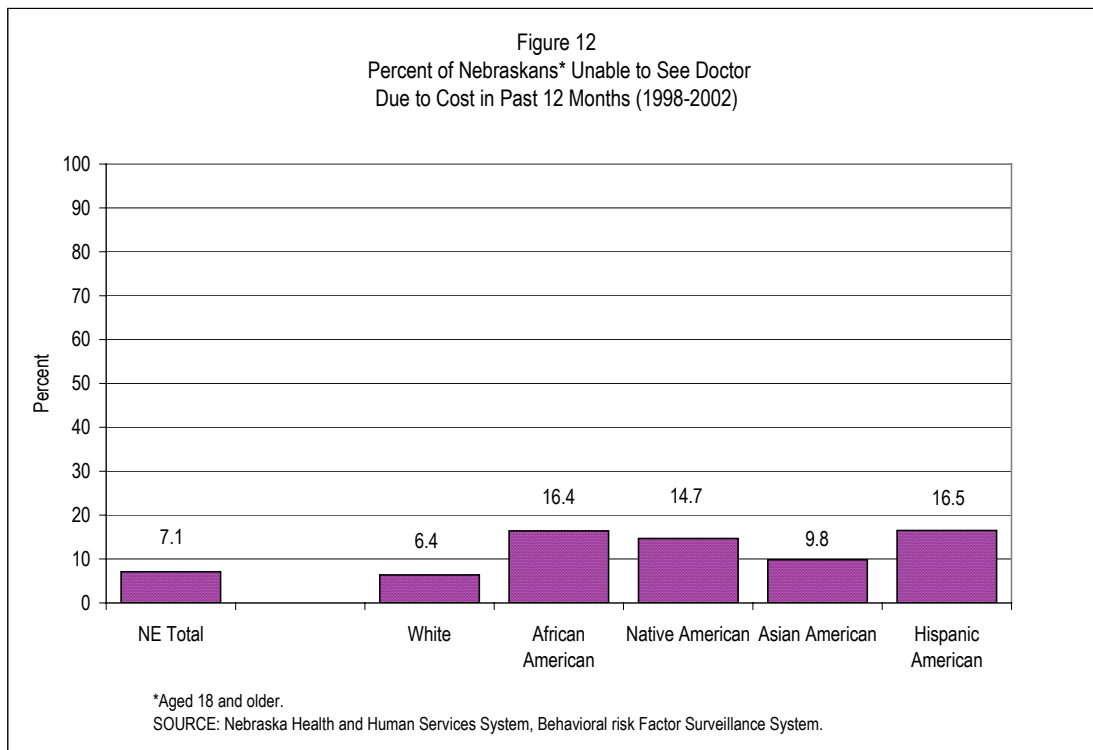
The following prevalence rates should be viewed, analyzed, and/or interpreted with caution as the data may have come from small numbers. Further investigation may be therefore needed to ascertain the rationale behind the change so that newer intervention mechanisms can be tailored toward such. Nonetheless, the 1998-2002 Nebraska BRFSS found that Native Americans (78.1 percent) and African Americans (76 percent) were somewhat more likely to have had a routine checkup in the past year than all Nebraskans (68.1 percent) and white Nebraskans (67.8 percent) (*Figure 11*).

Asian Americans (67.3 percent) and Hispanic Americans (58 percent) were less likely to have routine checkup in the past year. Rates for other types of preventive health care were generally about equal for whites and racial and ethnic minorities for whom data are available, although some differences were apparent. Detailed findings for several types of health screening are presented later in this report with the related disease category; for example, prevalence of blood pressure checks is discussed in the cardiovascular disease section.



Could Not See Doctor for Needed Care

The proportion of adult Nebraskans who had at some time in the past 12 months been unable to see a doctor because of the cost of care was about the same for African Americans (16.4 percent) and for Hispanics (16.5 percent) in 1998-2002 (*Figure 12*).



A proportion of Native Americans, (14.7 percent) and Asian Americans (9.8 percent), also said they had foregone a needed physician visit during the last year because of cost, compared to whites (6.4 percent).

Shortage of Minority Health Care Providers

There is currently a shortage of physicians who are of a racial and ethnic minority groups, other than white. Less than four percent of all U.S. physicians are African Americans, although this population comprises nearly twelve percent of the U.S. population. Persons of Hispanic origin and Native Americans are also underrepresented among U.S. physicians.

In Nebraska, as of August 1, 2003, there are 5,960 Primary Care Physicians and 19,692 Registered Nurses with Nebraska licenses, (and who may not necessarily live in the state) according the Nebraska Health and Human Services System's Advocate. However, data from the University of Nebraska Medical Center's Health Professions Tracking Center for 2002 revealed that there was a total of 4,814 primary healthcare professionals in Nebraska. Of this total, there were 972 dentists, 3,088 primary care physicians, 313 Nurse Practitioners, and 441 Physician Assistants. African Americans contributed 0.4 percent of dentists, 1.2 percent of primary care physicians, 0.3 and 0.2 percent of nurse practitioners and physician assistants, respectively.

Table 5B
Nebraska Primary Healthcare Professionals
By Race and Ethnic Origin (2002)

Race and Ethnicity	Number of Dentists		Number of Primary Care Physicians		Number of Nurse Practitioners**		Number of Physician Assistants	
	#	%*	#	%*	#	%*	#	%*
White/Caucasian	795	82.0	2,492	81.0	242	77.3	338	76.7
African American/Black	4	0.4	36	1.2	1	0.3	1	0.2
Native American/American Indian	1	0.1	6	0.2	2	0.6	2	0.5
Asian	18	1.9	165	5.3	-	-	2	0.5
Asian Indian	-	-	76	2.5	-	-	-	-
Chinese	1	0.1	15	0.5	-	-	2	0.5
Filipino	2	0.2	19	0.6	-	-	-	-
Japanese	-	-	3	0.1	-	-	-	-
Korean	-	-	8	0.3	-	-	-	-
South East Asia, Not Vietnamese	-	-	2	.07	-	-	-	-
Vietnamese	1	0.1	8	0.3	-	-	-	-
Other Asian	14	1.4	33	1.1	-	-	-	-
Other Pacific Island	-	-	1	.04	-	-	-	-
Hispanics	7	0.7	39	1.3	-	-	1	0.2
Hispanic/Other	7	0.7	33	1.1	-	-	1	0.2
Mexican Am/Chicano	-	-	2	.07	-	-	2	0.5
Puerto Rican-Comwlth	-	-	4	0.1	-	-	-	-
Foreign	-	-	3	0.1	-	-	-	-
Indian or Pakistani	-	-	11	0.4	-	-	-	-
Pakistani	-	-	17	0.6	-	-	-	-
Other/Unknown	147	15.1	319	10.3	68	22.0	95	21.6
Sub Total	972	100	3,088	100	313	100	441	100
Grand Total [4,814]								
%* Percent value is the percent of sub total, and may not be exactly 100% due to approximations. ** Note that UNMC Health Professions Tracking Center only tracks number of Nurse Practitioners and not Registered Nurses . Source: UNMC Health Professions Tracking Center, December 2002.								

Only one dentist, 6 primary care physicians and two each of nurse practitioners and physician assistants are Native Americans. Close to two percent (1.9) of dentists, 5.3 percent or 165 of the primary care physicians and 0.5 percent of physician assistants in Nebraska, are Asian Americans. Hispanics – including Mexican and Puerto Rican American health professionals and “others,” accounted for 7 or 0.7 percent of dentists and 39 or 1.3 percent of Nebraska primary care physicians and one physician assistant (Table 5B, see also Table 5C).

Overall, in 1999, of the total 1,717 primary care physicians in Nebraska, Asian Americans contributes approximately 4.8 percent while Hispanics make up 1.2 percent of Nebraska's primary care physician pool, with approximately 0.9 percent coming from African Americans, (Figure 13). In comparison, of the total 1,717, whites contributed 1,402 or approximately 81.7 percent, according to the Nebraska Health and Human Services System, County Profile data.

While it would seem as if substantial progress has been made in increasing the proportion of racial and ethnic minorities in primary care physician medicine, it is unclear how these changes occurred. However, one factor that may explain part of the sudden increases could be better reporting and coding of ethnicity between 1999 and 2002. This development may call for further studies. On the other hand, actual increase in the number of racial and ethnic primary care physicians may have occurred as a result of better recruiting practices. This sudden increase may require further studies to clarify the real reasons behind the gain.

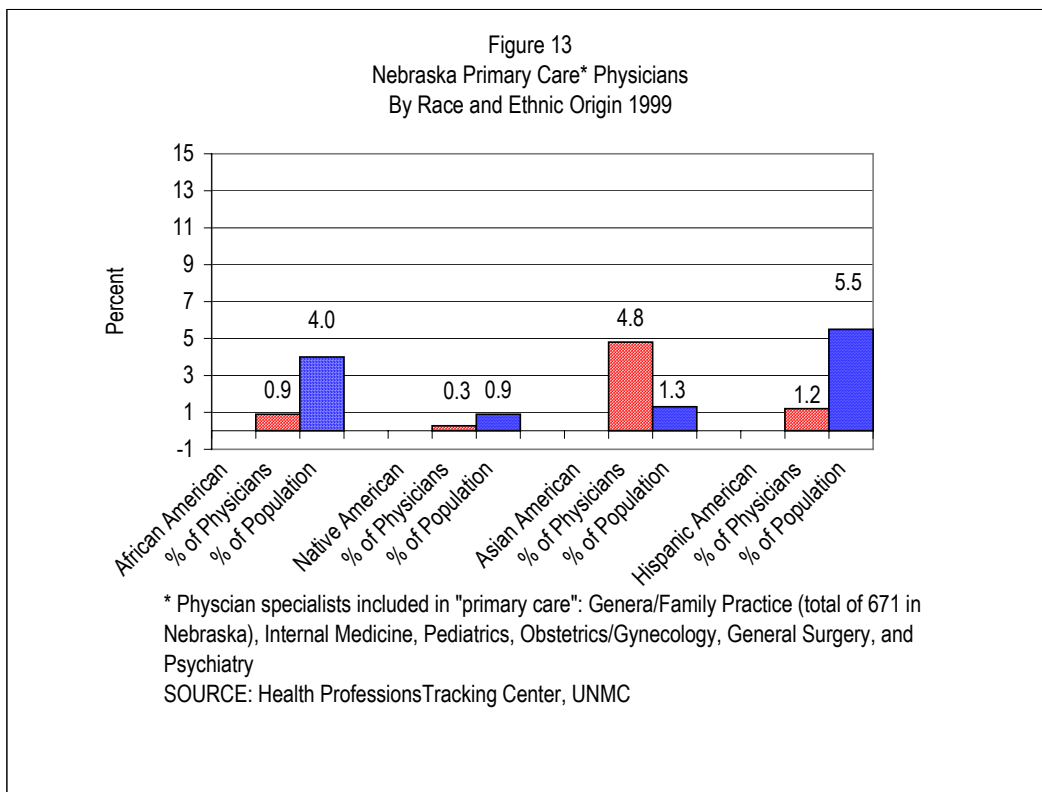


Table 5C
Nebraska Primary Care* Physicians
By Percent,** Race and Ethnicity
(1999 vs. 2002)

Category	Primary Care* Physicians				
	1999		2002		
	Number of Physicians	Percent of NE Total	Number of Physicians	Percent of NE Total	Percent Change 1999-2002
NE Total	1,717	100	3,088	100	80.0
White	1,402	81.6	2,492	80.7	77.7
African American	15	0.9	36	1.2	140.0
Native American	5	0.3	6	0.2	20.0
Asian American	82	4.8	165	5.4	101.2
Hispanic	21	1.2	39	1.3	86.0
*All specialties and total active physicians are included in "primary care": General/Family Practice, Internal Medicine, Pediatrics, Obstetrics/Gynecology, and Psychiatry. ** Due to Approximation, percent values may not equal 100 SOURCE: Health Professions Tracking Center, UNMC; Nebraska Health and Human Services, County Profile.					

In 2001 there were 17,713 Registered Nurses in Nebraska; minorities accounted for 357 or 2.0 percent the State's total. At the end of 2000, the total number of "Active Registered RNs in Nebraska" was 19,580, according to the Nebraska RN Survey Report of June 2001. In the 2000 study conducted by the Nebraska Center for Nursing, of the surveys mailed to the Registered Nursing Workforce of the 19,580 RNs, a total of 17,939 registered nurses returned the surveys. Of this, a total of 14,408 surveys provided usable data. Of the 14,408, "11,996 identified themselves as being principally employed in Nebraska." Of these, a total of 11,937 responded to survey race and ethnic question as follows: 11,674 self-reported that they are Caucasians, 110 African Americans, 65 Asian/Pacific Islanders, 29 Native Americans and 59 "Other." Included in the total respondents were 105 Hispanics of any race (Hawkins and Kelly, 2001, pp. 10 and 13), (*Table 5D*).

Table 5D
Nebraska Registered Nurses
By Race and Ethnicity 2000

Category	NE Total	White (Caucasian)	African American	Native American	Asian/ Pacific Islander	Hispanic American (Any race)	Other
RN's	11,937	11,647	110	29	65	105	59
Percent	100%	97.0	0.9	0.2	0.5	0.9	0.5
SOURCE: Nebraska Center for Nursing and Nebraska Health and Human Services, Survey 2000.							

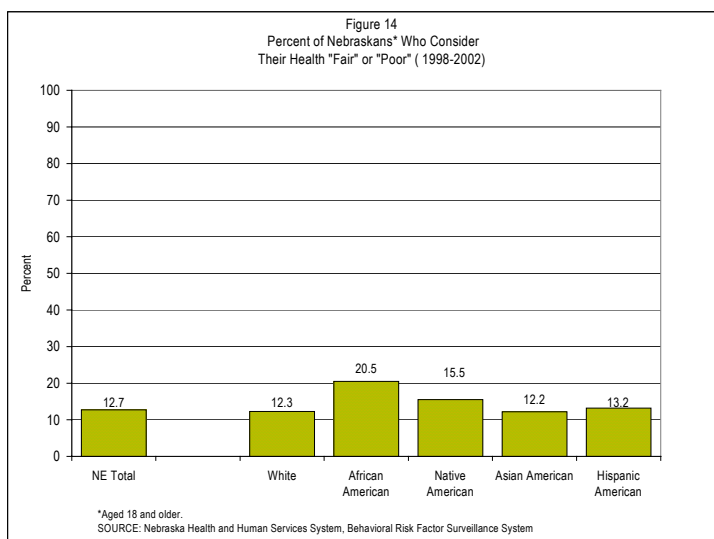
Increasing the proportion of racial and ethnic minorities in medicine, dentistry and nursing has been shown to be an effective way to improve health care for the underserved. Racial/ethnic minority physicians are more likely than white physicians to choose to go into primary care as a focus. They are also nearly twice as likely as white physicians to practice in underserved rural and urban areas (Lillie-Blanton, Martinez, and Salganicoff, 2001). Availability of providers who are racial or ethnic minorities can help or has the potential to eliminate some of the language and cultural barriers limiting access to care.

GENERAL HEALTH STATUS OF RACIAL/ETHNIC MINORITY NEBRASKANS

According to the March 2002 Report, *Unequal Treatment: Confronting Racial and Ethnic Disparities in Healthcare** published by the Institute of Medicine (IOM), racial and ethnic minorities across the nation are prone to receive lower-quality health care services than whites do, even when access-related factors, such as patients' insurance status, income, age and severity of health conditions are comparable. Thus, "Racial and ethnic minorities tend to receive a lower quality of healthcare than non-minorities, even when access-related factors, such as patients' insurance status and income, are controlled," the report stated. "Disparities in the health care delivered to racial and ethnic minorities are real and are associated with worse outcomes in many cases, which is unacceptable...The real challenge lies not in debating whether disparities exist, because the evidence is overwhelming, but in developing and implementing strategies to reduce and eliminate them," said committee chairperson, Alan Nelson (Washington Health Today, Winter 2002). Evidences of such health disparities as those described in the IOM's report are in some cases, present among Nebraska's racial and ethnic minorities, and are discussed in relevant sections throughout this report.

According to the 1998-2002 Nebraska Behavioral Risk Factor Surveillance System, adult Nebraskans who are African American or Native American are more likely than Nebraskans in general to consider their health "fair" or "poor" (*Figure 14*). Slightly more than twelve percent of white Nebraskans described their health as only fair or poor. In comparison, 20.5 percent of African Americans, and 15.5 percent of Native Americans in the state rated their health this

way, while Hispanic Americans (13.2 percent) are more likely, Asian Americans (12.2 percent) are less likely than whites to consider their health "fair" or "poor."



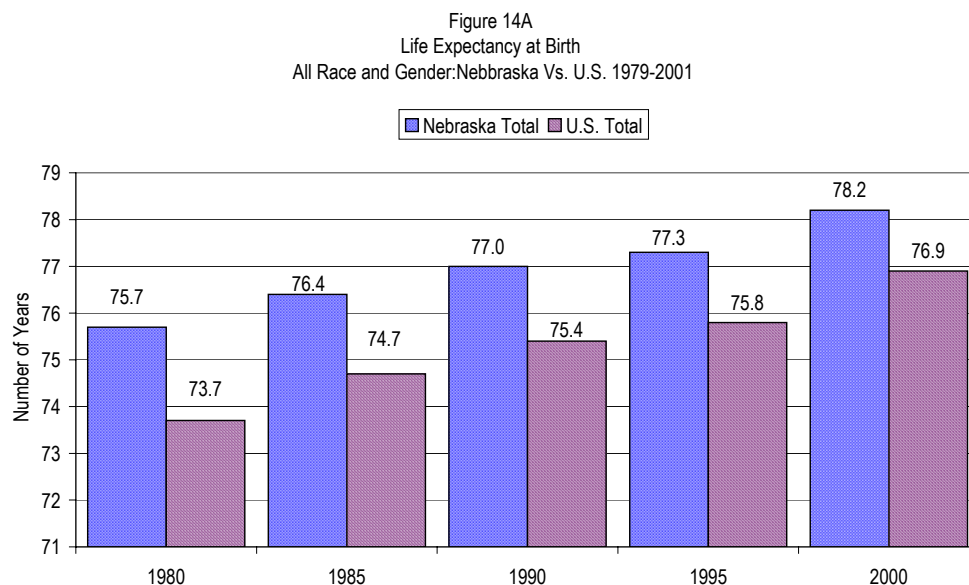
**(Summary of findings includes: (1) "Racial and ethnic disparities in healthcare exist and, because they are associated with worse outcomes in many cases, are unacceptable. (2) Racial and ethnic disparities in healthcare occur in the context of broader historic and contemporary social and economic inequality, and evidence of persistent racial and ethnic discrimination in many sectors of American life. (3) Many sources---including health systems, healthcare providers, patients, and utilization managers---may contribute to racial and ethnic disparities in healthcare. (4-1) Bias, stereotyping, prejudice, and clinical uncertainty on the part of healthcare providers may contribute to racial and ethnic disparities in healthcare. While indirect evidence from several lines of research supports this statement, a greater understanding of the prevalence and influence of these processes is needed and should be sought through research. (4-2) A small number of studies suggest that racial and ethnic minority patients are more likely than white patients to refuse treatment. These studies find that differences in refusal are generally small and that minority patient refusal does not fully explain healthcare disparities," (IOM, 2002, pp.1-20)*

MORTALITY AND DISEASE INCIDENCE IN NEBRASKA

Life Expectancy at Birth

According to the National Vital Statistics Report of June 30, 1999, published by the U.S. Department of Health and Human Services, life expectancy (LEB) at birth is the average number of years that a group of people (often referred to as a *cohort*), would live if the group were to experience present age-specific death rates. In the abridged life expectancy tables, there are 19 life expectancies generated and combined from life expectancies at age 0, 1-4, 5-9, 10-14, 15-19, 20-24...80-84 and 85+. Typically general life expectancy at birth is discussed and in this analysis, life expectancy refers to life expectancy at birth.

Life expectancy at birth in the U.S and Nebraska has been continuously increasing over the last 30 years (*Figure 14A, Tables 6, and 6A*). For instance, an infant born in 1999-2001 could expect to live 78.2 years, compared to 72.7 years for one born in 1969-1971.



SOURCE: National Vital Statistics Report, Vol. 50, No. 15, 2002 and Nebraska Health and Human Services System, Vital Statistics

Table 6
Life Expectancy at Birth
All Races and Gender for U.S. and
Nebraska (For Selected Years)

SELECTED YEARS	NE TOTAL YEARS	U.S. TOTAL YEARS	NE		U.S.	
			MALES YEARS	FEMALES YEARS	MALES YEARS	FEMALES YEARS
2001	78.3	-	75.6	80.7	-	-
2000	78.2	76.9	75.5	80.7	74.1	79.5
1995	77.4	75.8	74.3	80.2	72.5	78.9
1990	77.0	75.4	73.6	80.3	71.8	78.8
1985	76.4	74.7	72.7	80.0	71.1	78.2
1980	75.7	73.7	71.8	79.6	70.0	77.4
SOURCE: National Vital Statistics Report, Vol. 50, No. 15, 2002 and Nebraska Health and Human Services System, Vital Statistics						

Table 6A
Life Expectancy for State of
Nebraska (For Selected Years)

YEARS	TOTAL/YRS	MALES/YRS	FEMALES/YRS
2000-2002	78.3	75.7	80.8
1999-2001	78.2	75.6	80.7
1998-2000	78.2	75.5	80.8
1997-1999	77.7	74.8	80.5
1996-1998	77.6	74.7	80.4
1994-1996	77.4	74.3	80.3
1989-1991	77.0	73.7	80.3
1984-1986	76.4	72.8	80.0
1979-1981	75.7	71.8	79.6
1974-1976	74.3	70.6	78.1
1969-1971	72.7	68.9	76.8
SOURCE: Nebraska Department of Health and Human Services System, Vital Statistics.			

In Nebraska, the average life expectancy in 2001, was 78.3 years. In 2000, the average life expectancy in Nebraska was 78.2 years. Life expectancy in the U.S. overall (76.9 years) was slightly lower than Nebraska's. The average life expectancy in Nebraska in the three years, 2000-2002 was 78.3 years for whites and 71.6 years for African Americans. Native Americans experienced the lowest life expectancy of the major five racial and ethnic groups in Nebraska with 67.9 years during 2000-2002 (*Tables 6A, 6B, 6C, and 6D*). Life expectancy has increased for both males and females in Nebraska (*Table 6A*), although current female life expectancy (80.8 years) is several years longer than that for males (75.7 years).

Average life expectancy for African Americans increased 1.6 years since 1997-1999 compared to 1.3 years for whites. For males, the average life expectancy increased by 0.2 years among African Americans and by 0.6 for whites between 1997-1999 and the 2000-2002 period. In 2000-2002 African American females showed an improvement with an increase of 3.2 years from the baseline of 72.8 years during 1997-1999 when compared to white women during the same periods. However, it is important to realize that, in Nebraska though somewhat increases in life expectancy for African Americans than for white people occurred, the average number of years an African American baby could expect to live is still considerably fewer than that for white infants.

For Native Americans overall, life expectancy increased by 2 years from 65.9 years in 1997-1999 to 67.9 years during 2000-2002 and by far lower than the average for any other racial or ethnic group in Nebraska. Although females (70.1 years) recorded greater life expectancy than males (65.6 years), they experienced a slight increase of 2.2 years. Males also experienced a slight increase of 2.0 years when compared to the period 1997-1999. Overall, between 1979-1981 and 2000-2002, life expectancy for Native Americans rose by 4.1 years compared to 2.6 years for whites and 3 years for African Americans living in Nebraska.

Table 6B
Life Expectancy at Birth
for White Nebraskans
(For Selected Years)

YEARS	TOTAL/YRS	MALES/YRS	FEMALES/YRS
2000-2002	78.3	75.7	80.8
1999-2001	78.3	75.6	80.9
1998-2000	78.3	75.5	80.9
1997-1999	78.1	75.2	80.9
1996-1998	77.9	75.1	80.7
1994-1996	77.7	74.6	80.6
1989-1991	77.5	73.9	80.6
1984-1986	76.6	72.9	80.3
1979-1981	75.7	72.0	79.8
1974-1976	74.5	70.8	78.4
1969-1971	73.0	69.2	77.2
SOURCE: Nebraska Health and Human Services System, Vital Statistics			

Table 6C
Life Expectancy at Birth
For African American
(For Selected Years)

YEARS	TOTAL/YRS	MALES/YRS	FEMALES/YRS
2000-2002	71.6	68.1	75.1
1999-2001	71.4	68.4	74.4
1998-2000	71.4	68.8	73.9
1997-1999	70.4	67.9	72.8
1996-1998	70.1	67.3	72.7
1994-1996	70.0	66.4	73.5
1989-1991	70.7	67.1	74.2
1984-1986	70.1	66.6	73.6
1979-1981	68.5	64.9	72.1
1974-1976	67.1	62.8	71.8
1969-1971	64.8	61.1	68.6
SOURCE: Nebraska Health and Human Services System, Vital Statistics			

Life expectancy data for Asian and Hispanic Americans in Nebraska were not analyzed because of small number of cases and these vary widely from year to year. Younger populations among Asians and Hispanics along with the problem associated with the coding of ethnicity and multiple-race among the Hispanic/Latino population provides additional challenges so that any life expectancy data arrived at may be unreliable.

Table 6D
Life Expectancy at Birth
For Native Americans
(For Selected Years)

YEARS	TOTAL/YRS	MALES/YRS	FEMALES/YRS
2000-2002	67.9	65.6	70.1
1999-2001	66.5	65.8	67.4
1998-2000	66.7	65.0	68.3
1997-1999	65.9	63.5	67.9
1996-1998	68.1	64.2	72.3
1994-1996	67.6	62.6	73.2
1989-1991	66.6	62.9	70.4
1984-1986	67.4	63.5	72.0
1979-1981	63.7	59.7	67.8
SOURCE: Nebraska Health and Human Services System, Vital Statistics			

Years of Potential Life Lost

Years of potential life lost (YPLL) is a measure of premature death. As noted earlier in the methodology section of this report, the younger the person at the time of death, the greater the number of years of potential life lost. According to the Centers for Disease Control and Prevention (CDC), and National Center for Health Statistics (NCHS), for the United States as a whole, the age-adjusted YPLL for all races combined declined from 8,000 per 100,000 population in 1995-1997 to 7,787 in 1996-2000, and 7,694.7 in 2000 (based on 75 productive years of life lost) (CDC, Health, United States 2002, p.56). For males nationwide, the 2000 YPLL rate 9,763.8 per 100,000 is down from 9,920 recorded in 1998. Among females nationwide, a slight decrease was recorded in the 2000 YPLL rate of 5,704 from 5,743.4 per 100,000 recorded in 1998.

For African Americans nationwide, the 2000 rate of 13,177.3 YPLL per 100,000 is down from 13,640.3 in 1998. Still, this rate is 1.7 times the rate for the total U.S. population, reflecting higher mortality for several major causes of death that affect this population (e.g., heart disease, cancer [malignant neoplasms of trachea, lung and bronchus, prostate and breast cancers], cerebrovascular diseases, chronic lower respiratory disease, infant mortality, diabetes mellitus, unintentional injury, homicide and HIV/AIDS). Among Native Americans, in 2000 the rate of years of potential life lost (9,471.9) is also much higher than the national average, due in large part to higher rates for heart disease, cancer, cirrhosis of the liver, infant mortality, unintentional injury (particularly, motor vehicle-related injuries), homicide, and suicide. However, the latest YPLL rate represents a slight reduction from 1998 when 9,730 potential years of life were lost. For Hispanic Americans, the rate (6,284.4) is lower than the rates for whites (7,028.9), African Americans (13,177.3), and Native Americans (9,471.9) nationwide. The YPLL rate for Hispanic Americans also decreased from the 1998 rate of 6,321.9. Among Asian Americans, in 2000, the rate of years of potential life lost (3,928.5) decreased slightly from the 1998 rate of 4,001.8 and was by far, the lowest rate among all racial and ethnic groups. Cancer, heart disease and unintentional injuries contributed the highest rates of YPLL.

In Nebraska, the age-adjusted YPLL rate for 1998-2002 for all races combined was 6,279.2 years per 100,000 population, indicating a decrease in rate of close to 8 percent when compared to the 1993-1997 YPLL rate (6,823.4). The current Nebraska rate is also lower than the overall U.S. rate. African Americans in Nebraska experienced a YPLL rate of 12,587.1 that was more than twice as high as the white rate in 1998-2002 (*Table 7*). This rate has shown only a slight decrease (-8 percent) from the previous five-year period. The Nebraska rate for African Americans was about 4.5 percent lower than the U.S. rate for this population group.

Table 7
Years of Potential Life Lost – All Causes
Based on 75 Productive Years of Life
For Nebraska Racial and Ethnic Minority Population

	1993-1997			1998-2002		
	YPLL	Age-Adjusted Rate/100,000	Minority-to-White Ratio*	YPLL	Age-Adjusted Rate/100,000	Minority-to-White Ratio*
NE TOTAL All Causes	537,598	6,823.4		529,007	6,279.2	
White	485,288	6,519.2	1.0	472,424	6,208.7	1.0
African American	39,708	13,669.2	2.1	40,430	12,587.1	2.0
Native American	9,432	16,358.8	2.5	10,712	16,909.6	2.7
Asian American	2,632	3,206.9	0.5	3,965	3,729.4	0.6
Hispanic American	19,120	6,215.4	0.9	24,853	5,458.2	0.9
*Minority Age-Adjusted YPLL Rate/100,000 divided by White Age-Adjusted YPLL Rate/100,000.						
SOURCE: Nebraska Vital Statistics Data, 1993-1997 and 1998-2002. Nebraska Department of Health and Human Services.						

The highest rate of YPLL for any racial or ethnic group in Nebraska was recorded for Native Americans in 1998-2002 (16,909.6 YPLL). Although this represents a slight increase from 16,358.8 in 1993-1997, the current rate is 2.7 times the rate for whites in the state. The Nebraska rate is also 78.5 percent higher than the YPLL reported for Native Americans nationwide. The rate of the number of YPLL per 100,000 population for Hispanic Nebraskans (5,458.2) in 1998-2002 was only slightly higher than the corresponding rate for white residents of the state (6,208.7). However, the YPLL rate for this group has decreased by 12.2 percent over the previous five-year period. Compared to national rate for Hispanic Americans, the Nebraska rate is slightly lower (-13.1 percent). The 1998-2002 YPLL rate for Asian Americans in the state (3,729.4) is little more than one-half the white rate and represents a slight increase from the 1993-1997 rate of 3,206.9.

Leading Causes of Death

Table 8 lists the leading causes of death in Nebraska among whites, African Americans, Native Americans, Asian Americans and Hispanic Americans. In Nebraska, heart disease and cancer were the two leading causes of death in 1998-2002 among the five major ethnic and racial populations in the state. But there are differences among ethnic groups. Heart disease

was the leading cause of death among whites, African Americans, and Native Americans, while cancer was the leading cause of death among Asian Americans and Hispanic Americans followed by heart disease. The percentage of all deaths attributed to these two diseases varied with race and ethnic origin, ranging from highs of 28.7 percent for whites and 23.5 percent for Native Americans, to a low of 22.5 percent for African Americans. About one-fourth of all deaths were caused by heart disease during the five-year period 1998-2002. Among Asian Americans (18.0 percent) and Hispanic Americans (15.3 percent), the proportion of all deaths due to heart disease was smaller.

Cancer, the second leading cause of death in Nebraska, had a significant impact on both the Asian American, white, and African Americans, causing 30.6, 22.1 and 21.2 percent of all deaths among these groups, respectively. Cancer was the main cause of death for 17.4 percent of Hispanic Americans. Stroke (cerebrovascular disease) was also a frequent cause of death, ranking third among whites (7.4 percent), Asian Americans (8.1 percent), and African Americans (7.1 percent).

The proportion of deaths attributed to diabetes was generally greater among racial and ethnic minority residents than among whites in Nebraska. Diabetes was the third leading cause of death among Native Americans (6.3 percent) and the fifth among causes of death for Hispanics (5.1 percent) and African Americans (4.8 percent). Diabetes ranked sixth among Asians in Nebraska as the leading cause of death, accounting for 3.2 percent of all deaths in this population group.

Motor vehicle accidents ranked third behind heart disease as the leading cause of death among Hispanic Americans (9.2 percent). Among Asian Americans (6.3 percent), motor vehicle accidents ranked fourth as the leading cause of death during 1998-2002. Homicide ranked fifth and seventh as the leading cause of death among African Americans (3.6 percent) and Hispanics (4.1 percent). AIDS did not appear among the top 15 causes of death in Nebraska in 1998-2002 for any of the racial and ethnic minority groups, including whites. Birth defects ranked eight among the leading causes of death for Asian Americans, and eleventh among Hispanic Americans, but did not rank in the top 15 causes for other racial and ethnic groups in the state.

Table 8
Leading Causes of Death Among Nebraskans
by Racial / Ethnic Origin & Percent
(Based on Number of Deaths in 1998-2002*)

White (72,935 Deaths)	%	African American (2,362 Deaths)	%	Native American (554 Deaths)	%	Asian American (222 Deaths)	%	Hispanic American (948 Deaths)	%
Heart Disease	28.7	Heart Disease	22.5	Heart Disease	23.5	Cancer	30.6	Cancer	17.4
Cancer	22.1	Cancer	21.2	Cancer	13.0	Heart	18.0	Heart	15.3
Stroke	7.4	Stroke	7.1	Diabetes	6.3	Stroke	8.1	MV Acc	9.2
Chronic Lung	4.9	Diabetes	4.8	Cirrhosis	6.3	MV Acc	6.3	Non MV Acc	5.4
Pneumonia	2.8	Homicide	3.6	Non MV Acc	5.8	Diabetes	3.2	Diabetes	5.1
Diabetes	2.4	Infectious/Para	3.0	MV Acc	5.2	Non MV Acc	3.2	Stroke	4.2
Non MV Acc	2.4	Nephritis/ Nephrosis	3.0	Stroke	3.8	Suicide	2.7	Homicide	4.1
Alzheimers	2.4	Chronic Lung	2.4	Chronic Lung	2.9	Birth defects	2.3	Suicide	2.7
MV Acc	1.9	Pneumonia	1.9	Infectious/Para	2.7	Homicide	2.3	Birth Defects	2.6
Mental/ Psychosis	1.8	Non MV Acc MVC Acc	1.5 1.5	Homicide	2.5	All Other Causes	5.4	Cirrhosis	2.3
Nephritis/ Nephrosis	1.6	Hyper/Renal	1.4	Nephritis/ Nephrosis	2.4	-	-	Nephritis/Nephrosis	2.1
Suicide	1.3	Mental/ Psychosis	1.4	Pneumonia	2.0	-	-	Infectious/Para	2.0
Infectious/Para	1.1	Alzheimers	1.3	Other Digestive	1.1	-	-	Mental/Psychoses	1.4
All Other Causes	3.8	Suicide	1.1	Suicide	1.1	-	-	Pneumonia	1.3
				Birth Defects	1.1				
-	-	All Other Causes	6.9	-	-	-	-	All Other Causes	8.7

* Total Nebraska Resident Deaths for 1998-2002 = 76,632

Source: Nebraska Health and Human Services System, Vital Statistics, 1998-2002

HEALTH ISSUES

CARDIOVASCULAR DISEASES

Healthy People 2010 Goal

The “CDC and the National Heart, Lung, and Blood Institute are working together on the nation’s *Healthy People 2010* Objectives to combat heart disease and stroke. In doing so, they signed a Memorandum of Understanding (MOU) with the American Heart Association and (other) federal agencies to speed progress toward meeting the goals set forth in *Healthy People 2010*... The Memorandum of Understanding establishes four areas of mutual interest for achieving the *Health People 2010 Objectives*:

- Prevent the development of risk factors for cardiovascular disease (CVD) and stroke
- Detect and treat risk factors for CVD and stroke
- Achieve early identification and treatment of cardiovascular disease and stroke, especially in their acute phases
- Prevent the recurrence and complications of CVD and stroke, ” (National Institute of Neurological Disorder and Stroke, (NINDS). 2001, pp. 1-2).

The Health Impact of Cardiovascular Diseases

According to the American Heart Association, as reported by the CDC, cardiovascular diseases (CVD), primarily heart disease, stroke, and atherosclerosis, are among the nation’s leading cause of death for both men and women and among all racial and ethnic groups

- ◆ More than 61,800,000 people in the United States, have one or more forms of cardiovascular disease, including high blood pressure, coronary heart disease, stroke, congestive heart failure, and other conditions. Of the above number, females comprise 51.9 percent when males make up 48.1 percent of all CVD.
- ◆ Specifically, of the close to 62 million Americans with CVD, 25.1 million people (or 40 percent) are 65 years of age and older. An estimated 6,294,000 CVD hospital discharges will be made by the end of 2003.
- ◆ Over 949,000 Americans die annually from CVD. This translates to 2,600 deaths each day or about 1 death per 33 seconds.
- ◆ During 2002, CVD is estimated to cost the nation \$329.2 billion (– including direct and indirect expenses).

- ◆ Modifiable risk factors for CVD include:
 - ◆ High blood pressure
 - ◆ High blood cholesterol level
 - ◆ Use of tobacco products
 - ◆ Physical inactivity
 - ◆ Poor nutrition
 - ◆ Overweight and obesity
 - ◆ Diabetes

According to the CDC, over the past 20 years in the United States, the death rate for cardiovascular disease has declined by 39 percent. This overall decline in CVD is primarily the result of dramatic declines in coronary heart disease and stroke, changes in lifestyle and risk factor reduction, along with technological and medical advances, contributed to the decline. Despite the recent decline in CVD, CVD remains the leading cause of death, killing nearly as many Americans as all other diseases combined. About two-thirds of all heart-attack patients do not make a complete recovery and the majority of stroke survivors are left with some degree of impairment. Thus, cardiovascular disease is also the leading causes of disabilities and limitation in physical activity.

Deaths Due to Cardiovascular Diseases

In 2000, 2,403,351 people nationwide, died from some form of cardiovascular disease at an age adjusted rate of 872 death per 100,000 population. The economic cost of CVD to the nation in 2000 was an estimated \$326.6 billion in direct health care and related costs, according to the National Vital Statistics (NVS) report.

In Nebraska, cardiovascular disease was the cause of 29,813 deaths between 1998 and 2002. Thus, an average of 5,962.6 CVD deaths occurred annually in Nebraska over the five-year period. In 2002, of the total 15,721 deaths, heart disease was the cause of 4,235 deaths (26.9 percent of all deaths) in Nebraska. Heart disease caused the deaths of 2,042 males and 2,193 females in 2002 while cerebrovascular diseases (stroke), caused the deaths of 408 males and 694 females. These forms of cardiovascular disease accounted for a total of 5,337 deaths in 2002, based on Nebraska's 2002 Vital Statistics Report.

2010 Objectives for Heart Disease

According to the Nebraska 2010 Health Goals and Objectives, Coronary Heart Disease “(CHD), also called ischemic heart disease or coronary artery disease, is a term used to identify several disorders that reduce the blood supply to the heart muscle. This impairment of circulation to the heart is most frequently the result of narrowing of the coronary artery by atherosclerosis. The most common manifestations of CHD are angina pectoris (chest pain), myocardial infarction (heart attack), and sudden death.” The Healthy People 2010 Objective #12 for CHD includes:

- ◆ To reduce CHD mortality for all persons in Nebraska by at least 20 percent, with additional objectives by race and ethnicity.
- ◆ To reduce CHD death rates for African Americans and Native Americans to 121.5, and for Asian and Hispanic Americans to 26.0 and 69.6 deaths per 100,000 population respectively.
- ◆ To reduce hospitalizations for congestive heart failure among elderly persons in Nebraska by at least 50 percent.
- ◆ To reduce the prevalence of hypertension among adults (age 18 and older) in Nebraska to no more than 16 percent, and
- ◆ To increase the proportion of adults (age 18 and older) in Nebraska who have had their blood cholesterol level checked within the past five years to at least 80 percent.

Current Status of Heart Disease

According to CDC, heart disease is the leading cause of death in both the nation, and also in Nebraska. “Three health-related behaviors – cigarette smoking and exposure, lack of physical activity, and poor nutrition – contribute markedly to heart disease. Modifying these behaviors is critical for both preventing and controlling heart disease. Modest changes in one or more of these risk factors can have a large public health impact. Heart disease can also be prevented or controlled by changing governmental policies (such as restricting access to cigarette) and by changing environmental factors (such as providing better access to healthy foods and opportunities for physical activity),” the CDC suggested. Nationwide,

- ◆ Heart disease killed more than 725,000 Americans in 1999, and accounted for more than 30 percent of all deaths.
- ◆ In 1999, rates of death from heart disease were 29% higher among blacks than whites.
- ◆ In 1999, rates of death from heart disease were 49 percent higher among men than among women.
- ◆ An estimated 101 million Americans have total blood cholesterol levels of 200 milligrams per deciliter (mg/dL) or higher, which puts them at increased risk for heart disease.

In Nebraska, between 1998-2002, heart disease in all forms accounted for a total of 21,804 deaths. Of the total 2,368 deaths occurred among racial and ethnic minorities, heart disease accounted for 35.8 percent or a total of 848 deaths (African Americans 532; Hispanic Americans, 146; Native Americans, 130; and Asian Americans, 40) or an average of 169.6 deaths per year between 1998 and 2002. Heart disease ranked first as a cause of death for African Americans, Native Americans and whites during the 1998-2002 period.

As Figure 15 indicates, heart disease mortality rates increased for all racial and ethnic groups except for white and African Americans (25 percent) in 1998-2002 as opposed to the previous five-year period. However, Asian Americans (106.2 percent) by far, experienced the highest increase in the disease death rate during 1998-2002, while the increase was small for Hispanic Americans (3.1 percent). Age-adjusted mortality data for heart disease show substantial differences between racial and ethnic groups in the state (*Table 9*).

Table 9 indicate that during 1998-2002, heart disease death rates for both Native Americans (435.7) and African Americans (280.4 deaths per 100,000 population) in Nebraska were considerably higher than the rate for white residents (225.5). When compared to the white population, Native Americans are almost twice (1.9 times) more likely than white residents to die from heart disease. Native American females were 2.2 times as likely as white females to die from this cause. For African Americans, the death rate was 1.2 times the rate for whites. Although Asian Americans (152.6) had lower rates than whites, this group experienced a significant increase of 102.6 percent in heart disease mortality rate. Persons of Hispanic origin (134.4) in Nebraska also had lower rates of death from this cause than did whites (225.5).

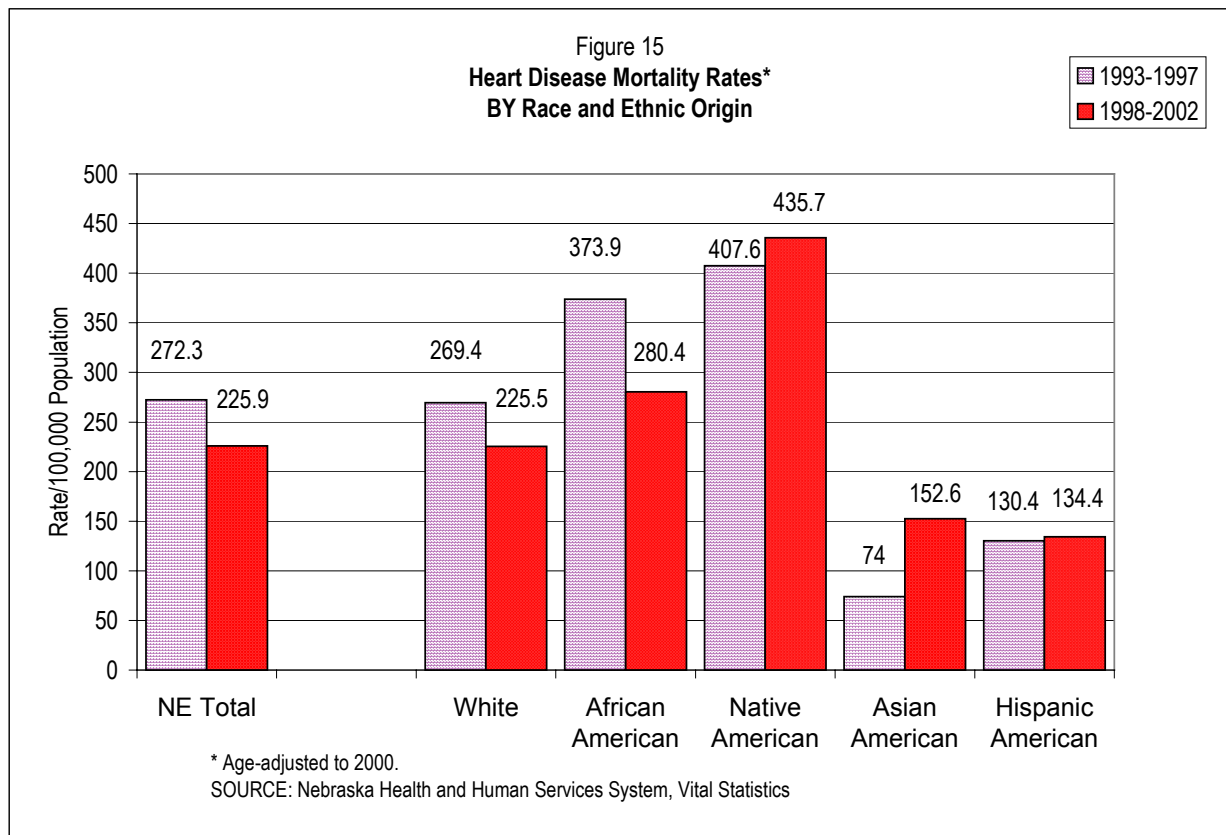


Table 9
Cardiovascular Disease
Mortality Rates and Relative Risk of Mortality
For Nebraska Racial /Ethnic Minority Populations

	1993-1997 Age-adjusted* Mortality Rate per 100,000 population	Relative Risk			1998-2002 Age-adjusted* Mortality Rate per 100,000 population	Relative Risk		
		Total	Male	Females		Total	Male	Females
CVD								
NE Total	359.9				307.9			
White	356.2	1.0	1.0	1.0	306.7	1.0	1.0	1.0
African American	499.6	1.4	1.2	1.6	413.9	1.3	1.2	1.5
Native American	483.7	1.4	1.5	1.2	547.9	1.8	1.6	1.9
Asian American	110.2	0.3	0.3	0.3	216.4	0.7	0.6	0.8
Hispanic American	169.7	0.5	0.5	0.5	184.5	0.6	0.6	0.6
Heart Disease								
NE Total	272.3				225.9			
White	269.4	1.0	1.0	1.0	225.5	1.0	1.0	1.0
African American	373.9	1.4	1.2	1.6	280.4	1.2	1.1	1.4
Native American	407.6	1.5	1.6	1.5	435.7	1.9	1.6	2.2
Asian American	74.0	0.3	0.3	0.2	152.6	0.7	0.6	0.7
Hispanic American	130.4	0.5	0.5	0.5	134.4	0.6	0.5	0.7
Stroke								
NE Total	60.3				57.7			
White	59.6	1.0	1.0	1.0	57.1	1.0	1.0	1.0
African American	84.4	1.4	1.4	1.4	89.5	1.6	1.5	1.6
Native American	68.3	1.1	1.9	0.7	73.6	1.3	1.6	1.1
Asian American	36.2	0.6	0.6	0.6	60.4	1.1	1.0	1.1
Hispanic American	24.9	0.4	0.6	0.3	38.4	0.7	0.8	0.5
*Age adjusted to 2000								
SOURCE: Nebraska Health and Human Services System, Vital Statistics, 1993-1997 and 1998-2002.								

Years of Potential Life Lost (YPLL) Due to Heart Disease

Years of Potential Life Lost (YPLL) (to a disease, condition or cause) as a health indicator is important because it measures *premature death*. It is calculated using 57 years of potential life as the basis. For instance, infants who die at 6 months have lost 74.5 year of potential life. An adult who dies at age 50 years has lost 25 years of life.

For the five-year period (1998-2002), an average of 2,963.5 and 2,225.8 years of potential life were lost annually to CVD and heart disease among racial and ethnic minority residents of Nebraska (*Table 10*). The number of years lost per person from heart disease is 2.2 times higher for African Americans and 3.0 times higher for Native Americans as for whites. Although heart disease is considered a condition of older adults, national studies report that

the prevalence of heart disease among African Americans and Native Americans under age 45 is much higher than the rate for the non-minority populations. Death rates for these younger age groups are also higher than the rates for whites, resulting in a greater number of years of potential life lost.

Deaths Due to Cerebrovascular Disease (Stroke)

Strokes are the third leading cause of death in both Nebraska and the United States. Stroke (or cerebrovascular disease) was the cause of 167,661 deaths in the U.S. in 2000 and 1,102 deaths in Nebraska in 2002. Among Nebraska's racial/ethnic minorities, strokes resulted in a total of 247 or an average of 49.4 deaths annually over the five-year period of 1998-2002. Current stroke death rates for African Americans (89.5 deaths per 100,000) between 1998-2002 indicated a slight increase of 6 percent when compared to 1993-1997 (84.4). Native Americans also witnessed a slight increase of 7.8 percent on stroke mortality rate during this time period. Both Asian Americans (60.4 deaths per 100,000) and Hispanic Americans (38.4 deaths per 100,000) experienced significant increases in the stroke mortality rate when compared to the previous five-year period. (*Figure 16*).

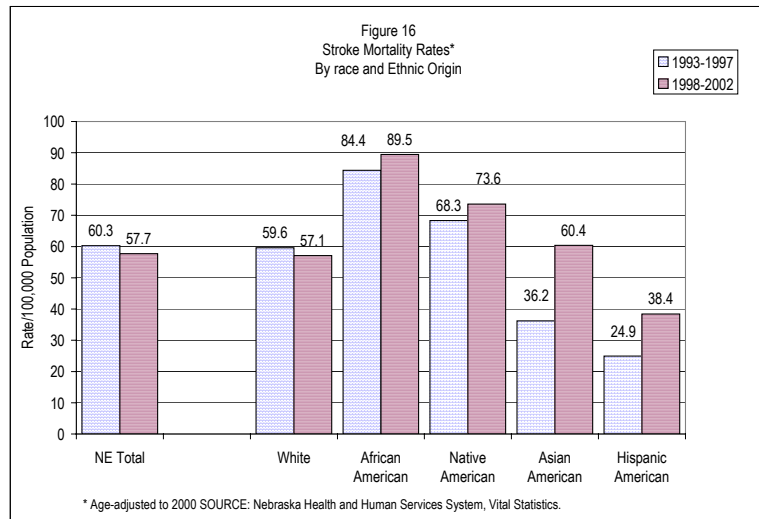
Nationwide, mortality rates for stroke were almost equal between whites and Asian Americans, and slightly lower for Hispanic Americans and Native Americans. The stroke death rate for African Americans in the United States was about double the rate for other racial and ethnic groups. During the most recent five-year period (1998-2002) in Nebraska, the death rate due to stroke was 1.6 times as high for African Americans (89.5) as the rate for whites (57.1) (*Table 9*). In contrast to national rates, the Nebraska stroke mortality rate for Native Americans (73.6) is 1.3 times the white rate. For this population group, stroke mortality rates for men over the last ten years have been 1.6 times as high as the rate for white men, while rates have been about equal for Native American and white women. Stroke mortality rates for Asian Americans (60.4) increased by 66.9 percent in the latest five-year period, so that now Asian Americans are 1.1 times as likely as whites to die from stroke. Rates for Hispanic Americans are 0.7 times the white rate.

Table 10
CVD
Years of Potential Life Lost-Heart Disease and Stroke
Based on 75 Productive Years of Life
For Nebraska Racial and Ethnic Minority Populations

Category	1993-1997			1998-2002		
	# of Total YPLL	Age-Adjusted Rate/ 100,000 Population	Minority-to-White Ratio*	# of Total YPLL	Age-Adjusted Rate/ 100,000 Population	Minority-to-White Ratio*
CVD						
Nebraska Total	114,713	1,461.9		101,641	1,216.4	
White	105,191	1,398.9	1.0	91,658	1,179.2	1.0
African American	5,532	2,441.8	1.7	7,779	2,827.5	2.4
Native American	1,684	4,030.8	2.9	1,632	3,354.6	2.8
Asian American	509	740.3	0.5	460	553.9	0.5
Hispanic American	1,717	904.9	0.6	1,983	809.3	0.7
Average/Year (Minorities)	1,888.4			2,370.8		
Heart Disease						
Nebraska Total	93,179	1,189.9		81,066	970.8	
White	85,693	1,141.4	1.0	73,425	945.5	1.0
African American	5,532	2,441.8	2.1	5,821	2,102.3	2.2
Native American	1,471	3,521.5	3.1	1,428	2,865.7	3.0
Asian American	391	524.1	0.5	285	334.7	0.4
Hispanic American	1,298	698.1	0.6	1,369	583.2	0.6
Average/Year (Minorities)	1,738.4			1,780.6		
Stroke						
Nebraska Total	15,057	191.0		14,751	176.3	
White	13,491	179.0	1.0	12,737	163.7	1.0
African American	1,241	524.9	2.9	1,693	621.9	3.8
Native American	207	490.6	2.7	172	397.8	2.4
Asian American	119	216.2	1.2	144	178.8	1.1
Hispanic American	355	160.7	0.9	465	167.2	1.0
Average/Year (Minorities)	384.4			494.8		
*Minority Age-Adjusted Mortality Rate/100,000 divided by White Age-Adjusted Mortality Rate/100,000 SOURCE: Nebraska Health and Human Services System, Nebraska Vital Statistics data, 1993-1997 and 1998-2002.						

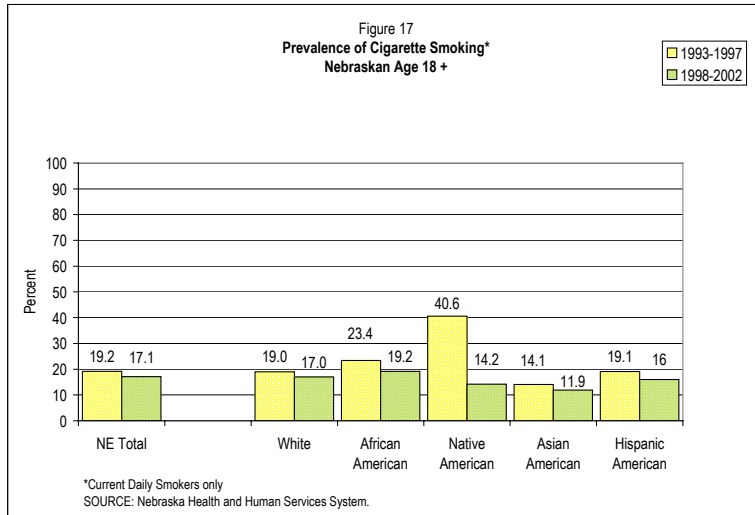
Years of Potential Life Lost (YPLL) Due to Strokes

The 1998-2002 data indicated that approximately 494.8 years of potential life were lost each year due to strokes among racial and ethnic minorities in Nebraska (Table 10). African Americans in the state lost about four times as much YPLL while Native Americans lost more than two times as many potential years to stroke when compared to white Nebraskans.



Risk Factors

Smoking



Tobacco use is the cause of about 418,000 deaths each year throughout the U.S. according to 1999 data from the Center for Disease Control and Tobacco Information and Prevention Source (TIPS). For every five deaths in the U.S., one is attributable to tobacco-related use and complications. Smoking also triples the risk of dying from heart disease among middle-aged women and men.

Results of the 1994 National Health Interview Survey (NHIS) indicated that the smoking rate is higher among people living below the poverty level (35 percent) than those living at or above the poverty level (24 percent).

In Nebraska, data from the Behavioral Risk Factor Surveillance Survey (1998-2002) demonstrated that the proportion of adults who currently smoke cigarettes varies by race and ethnic origin (Figure 17).

The rate for African Americans (19.2 percent) was slightly higher than that of whites (17 percent), Hispanic Americans (16 percent), Native Americans (14.2 percent), and Asian Americans (11.9). Although the data indicates a huge drop on the cigarette smoking rate for Native Americans, caution must be exercised here as the sample size may have been small.

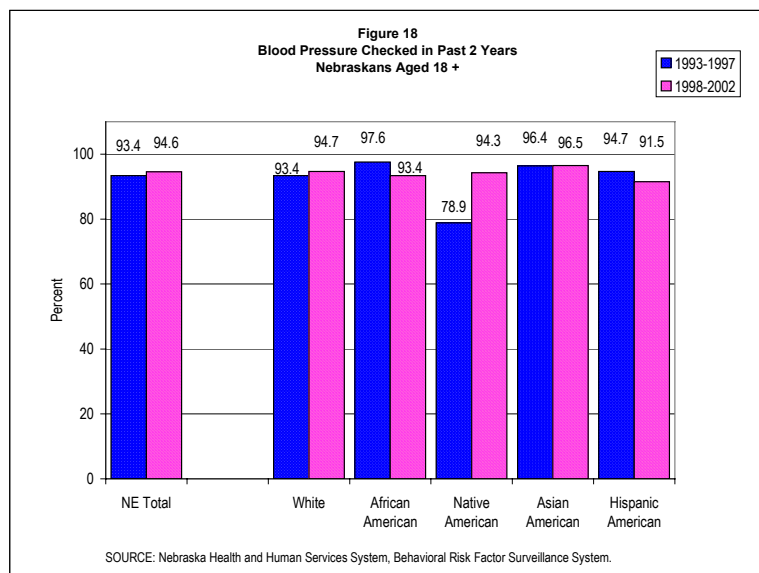
Hypertension (High Blood Pressure)

According to UC Davis Health System:

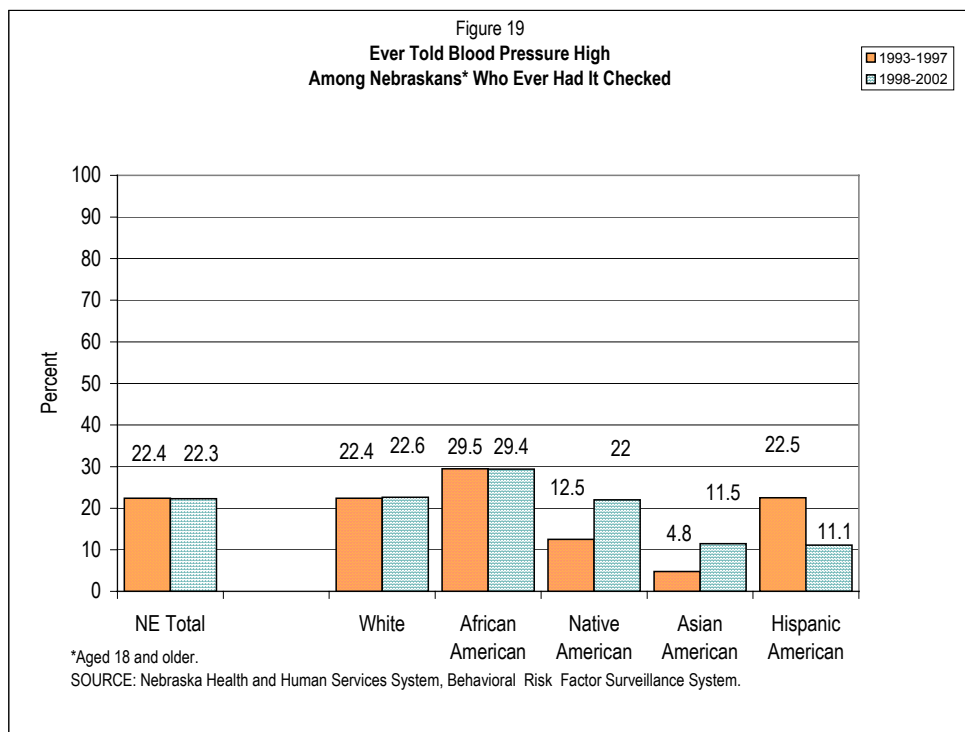
High blood pressure, also called hypertension, occurs when the body's smaller blood vessels (known as the arterioles) narrow, which causes the blood to exert excessive pressure against the vessel walls. The heart must therefore work harder to maintain this higher pressure. Although the body can tolerate increased blood pressure for months and even years, eventually the heart can enlarge and be damaged (a condition called *hypertrophy*), and injury to blood vessels in the kidneys, the brain, and the eyes can occur. Two numbers are used to describe blood pressure; the systolic and diastolic. For example, optimal blood pressure is less than 120/80 mm Hg (systolic/diastolic). The systolic pressure (the higher and first number) measures the force that blood exerts on the artery walls as the heart contracts to pump out the blood. The diastolic pressure (the lower and second number) is the measurement of force as the heart relaxes to allow the blood to flow into the heart. Blood pressure is now categorized as optimal, normal, high normal, and hypertensive. Optimal pressure is below 120/80 (systolic/diastolic); normal pressure is between 120/80 and 130/85 and should be everyone's upper goal. High normal is considered to be between 130-139/85-89. A diagnosis of hypertension is given when blood pressure is over 140/90. Hypertension is further categorized into three stages: stage 1 or mild (140-159/90-99), stage 2 or moderate (160-179/100-109), and stage 3 or severe (over 180/110), (UCDAVIS Health System, 2000, p.1).

Persons with blood pressure higher than 140mm Hg systolic and 90 mm Hg diastolic and/or taking antihypertensive medication are diagnosed with high blood pressure, or hypertension. Very high blood pressure increases the risk of developing coronary heart disease by two to four times the normal rate. High blood pressure also increases the risk of stroke, in that “half or more of all stroke victims have uncontrolled high blood pressure” or have hypertension, according to Stanford CVIR - Treatment Center. As a result, persons with high blood pressure are four to six times as likely as the general population to have a stroke.

Nationwide, African Americans and persons of Hispanic origin exhibit a higher prevalence of high blood pressure than non-Hispanic white persons. Acute hypertension rates are also four times higher among African American men than among white men. As revealed by the combined results of the 1998-2002 Nebraska BRFSS, a high percentage of Asian Americans (96.5 percent), Native Americans (94.3 percent), African Americans (93.4 percent), Hispanic Americans (91.5 percent), and the white population (93.4 percent) reported that their blood pressure was tested in the past two years (*Figure 18*).



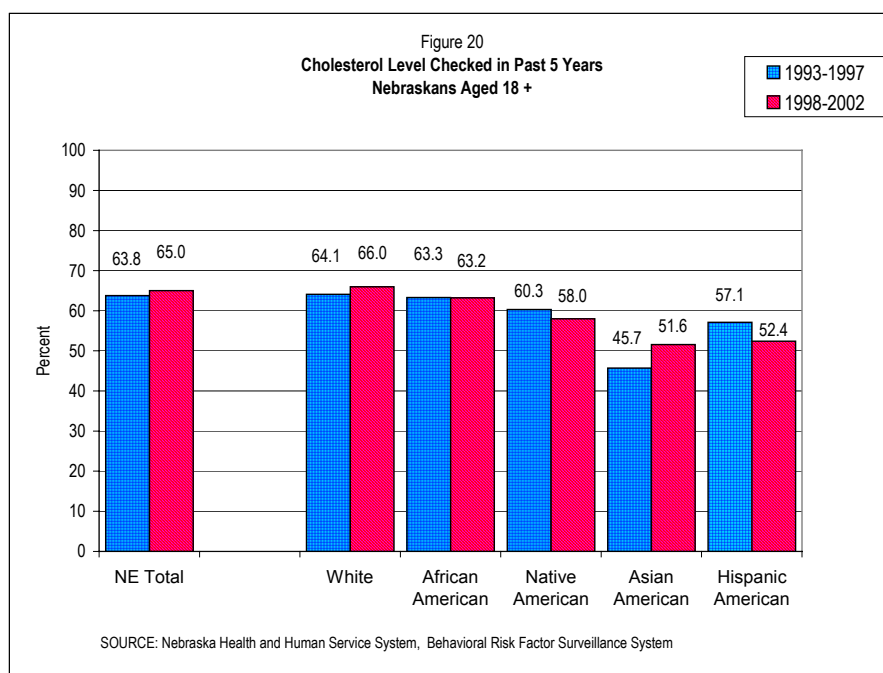
Among those who ever had their blood pressure checked, 22.3 percent of Nebraskans indicated that they had been told that it was high (*Figure 19*). African Americans continued to have the greatest prevalence of high blood pressure (29.4 percent), placing this segment of the population “at higher risk.” White Nebraskans (22.6 percent) and Native Americans (22 percent) were also more likely to develop hypertension than Asian Americans (11.5) and Hispanic Americans (11.1 percent). Small sample sizes may have affected the change in prevalence for Native, Asian and Hispanic Americans.



High Blood Cholesterol Level

Nationwide, more than 52 million adult Americans suffer from high blood cholesterol levels. Adults with blood cholesterol levels in the high range of 239mg/dL and above have twice the risk of developing coronary artery disease. The recommendation from the National Cholesterol Education Program is that blood cholesterol levels be checked at least once every five years in healthy adults aged twenty and older. An increasing proportion of the population has had their cholesterol levels checked. The combined results of the Nebraska 1998-2002 Behavioral Risk Factor Surveillance Survey (BRFSS), indicated the proportion of adults who have had their cholesterol levels checked within the last five years varied slightly from one race/ethnic origin to the other. Statewide, 65 percent of all adults in Nebraska reported that they had a blood cholesterol checked within the past five years (*Figure 20*). In comparison, the proportion of African Americans (63.2 percent), Native Americans (58 percent), Hispanic Americans (52.4 percent), Asian American (51.6 percent) and white Americans (66 percent) had this testing during the past five years.

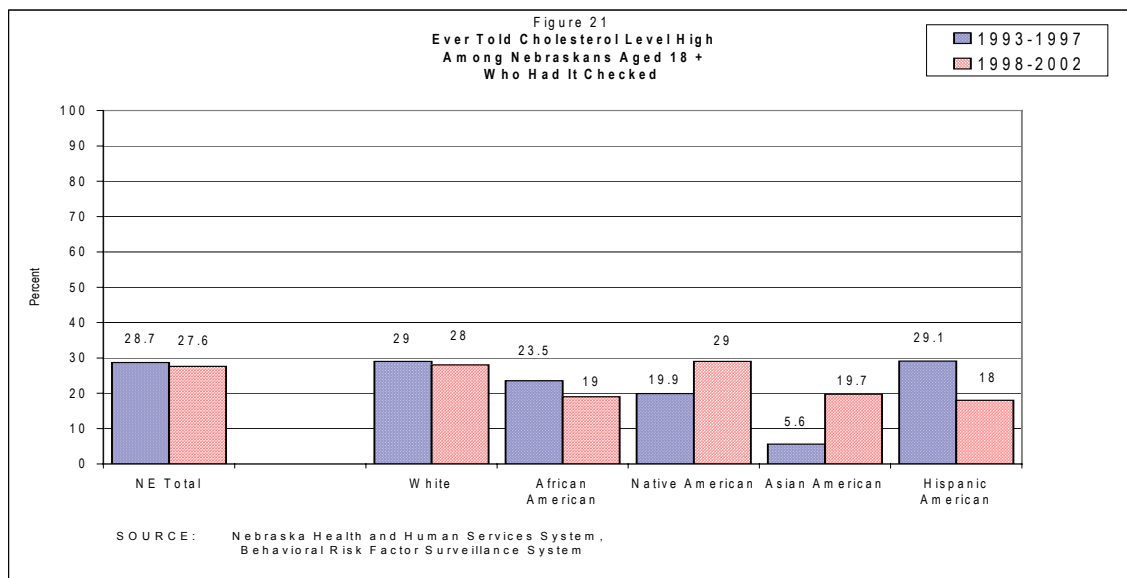
In Nebraska, Hispanic, Asian and African Americans were a little less likely than residents of the state overall (27.6 percent) to have been informed their cholesterol level is high. Among those who had their blood cholesterol level tested, 29 percent of Native American adults indicated they were told it was high, based on the combined BRFSS (*Figure 21*). Nearly two of every ten Asian (19.7 percent), African American (19 percent) and Hispanic Nebraskans (18 percent) reported having an elevated blood cholesterol level, compared to white (28 percent).

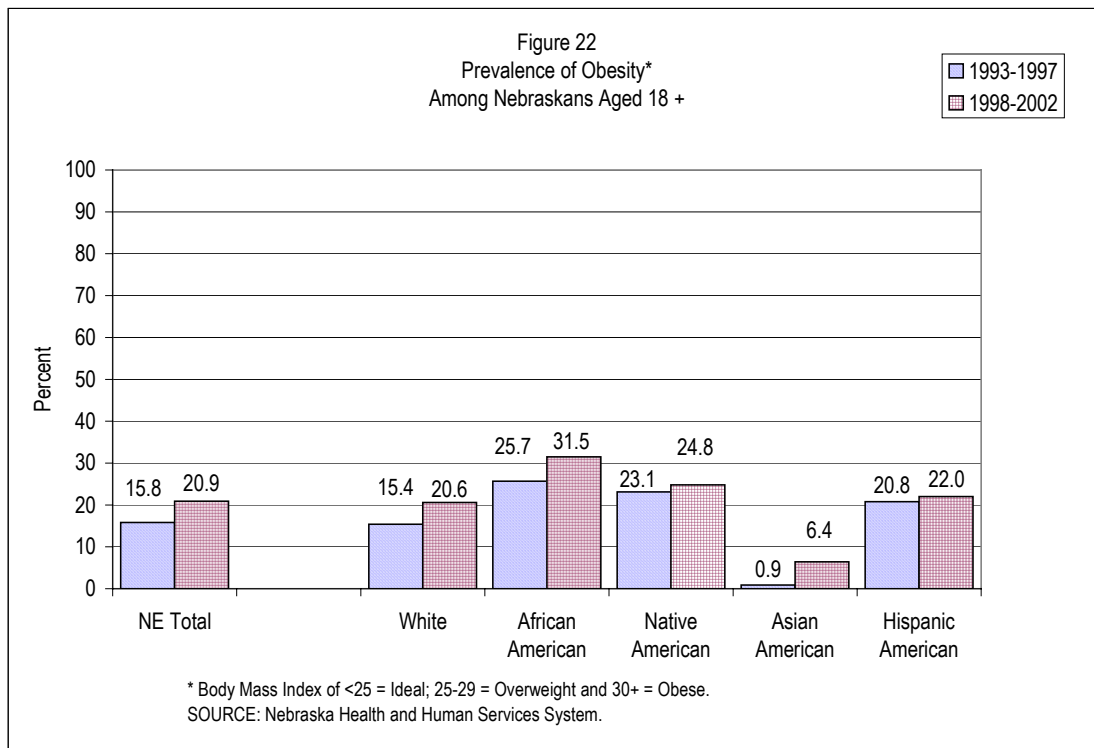


Obesity

Obesity and other weight-related conditions result in more deaths in the U.S. than any other risk factor but smoking. According to the NCHS, there are over 300,000 obesity and overweight-related deaths each year in the United States. According to the American Cancer Society (ACS), African Americans are at increased risk due to obesity: 37.7% African American women and 28.4% African American men are overweight based upon self-report within the BRFSS in 1998-1999.

In Nebraska, the 1998-2002 BRFSS results indicate that 20.9 percent of adult residents are obese based on the Body Mass Index (BMI) (*Figure 22*). On the average, adult Nebraskans of African American origin (31.5 percent), were more likely to be obese than Native American origin (24.8 percent), Hispanic American origin (22.0 percent), and Asian American origin (6.4 percent), compared to white residents (20.6 percent).





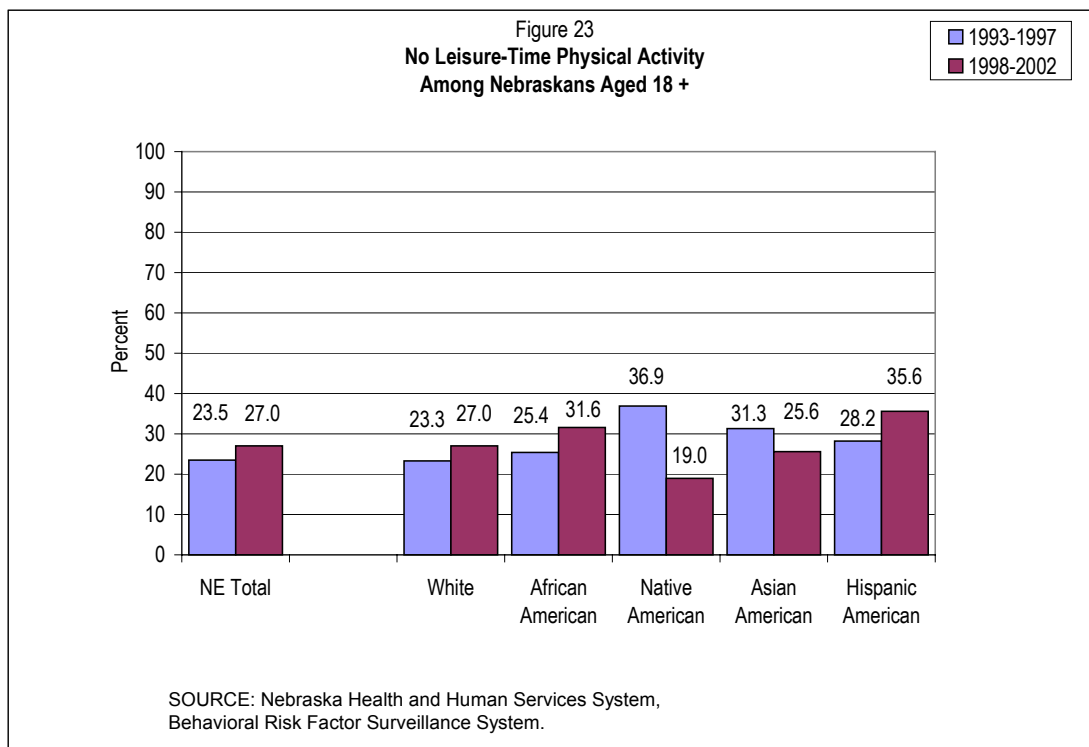
Physical Inactivity

Studies indicate that physically inactive people are almost twice as likely to develop heart disease as people who engage in regular exercise. Thus, physical inactivity coupled with smoking, high blood pressure, obesity and high blood cholesterol level are important cardiovascular risk factors. The “Healthy People 2010 Objective #23-3 is to increase the proportion of adults aged 18 and older who engaged in regular and vigorous physical activity in the past month to at least 30 percent, both nationwide and in Nebraska.” According to the combined 1998-2002 BRFSS, slightly more than one-fourth of adult Nebraskans (27 percent) reported that they had not participated in any leisure-time physical activity during the past month (*Figure 23*).

Prevalence of physical inactivity was higher among Hispanics (35.6 percent) and African Americans (31.6 percent). Relatively lower rates were recorded for Asian Americans (25.6 percent) and Native Americans (19 percent) in comparison to whites (27 percent). In the 1998-2002 BRFSS, 27.7 percent of adult Nebraskans 18 years and older self-reported participating in leisure-time physical activity only irregularly (*Table 11*). Caution should be used while analyzing the huge drop on the rate for Native Americans as this may have been generated from small sample respondents.

<p>Table 11</p> <p>Percentage of Nebraskans Engaged In Leisure-Time Physical Activities (Physical Activity Level)</p> <p>By Race/Ethnicity (BRFSS1993-1997 vs. 1998-2002)</p>								
Groups	1993-1997			1998-2002				
	No Physical Activity	Irregular Activity	Regular Activity	No Physical Activity	Irregular Activity	Regular Activity	Regular Vigorous Activity	Meets * Regular Activity Objectives
Nebraska Total	23.5	33.3	29.5	26.9	27.7	31.6	12.7	44.3
White	23.3	33.5	29.6	26.9	27.5	32.0	12.4	44.4
African Americans	25.4	38.4	22.1	31.6	36.1	18.0	12.5	30.5
Native American	37.0	30.8	18.0	19.0	33.3	32.3	14.2	46.5
Asian American	31.3	14.3	54.4	25.6	36.1	19.5	18.9	38.4
Hispanic Americans	28.2	29.6	24.3	35.6	30.2	23.8	8.8	32.6
<p>* Combined percent of Regular Activity and percent of Vigorous Regular Activity added to meet the Year 2010 objectives.</p> <p>SOURCE: Nebraska Health and Human Services System, Behavioral Risk Factor Surveillance System, (1993-1997 vs. 1998-2002).</p>								

However, in Nebraska 31.6 percent engaged in regular physical activity and an additional 12.7 percent indicated regular vigorous physical activity that is also strenuous enough to meet CDC's objectives for "appropriate physical activity during 1998-2002." (See definition below).



Sedentary Lifestyle: Definitions: According to CDC, “appropriate physical activity” is defined as “exercise which involves large muscle groups in dynamic movement for periods of 20 minutes or longer, three or more days per week, and which is performed at an intensity of 60 percent or greater of an individual’s cardiorespiratory capacity.” Based on this definition, the computer scoring system assigns each respondent to one of the following categories:

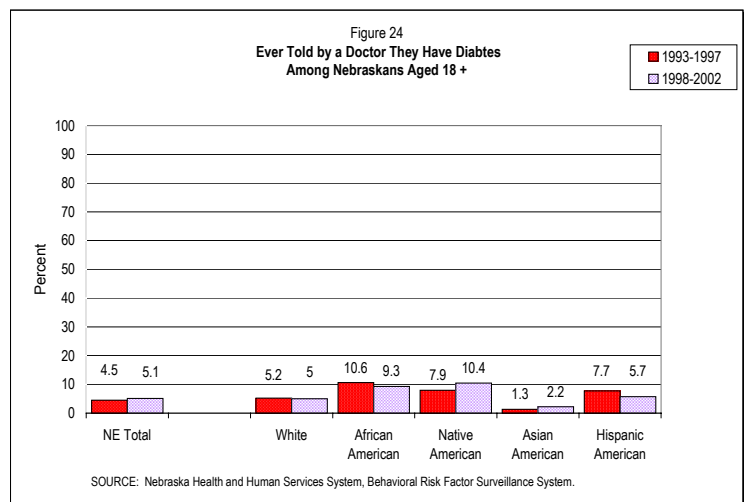
- 1) Sedentary--no leisure-time physical activity;
- 2) Irregularly Active—activity reported but duration and frequency is either less than 20 minutes per session, less than three times per week, or both;
- 3) Regularly Active, Not Meeting Objectives—activity reported and performed 20 minutes or more per session, three times or more per week, BUT either the “60 percent of cardiorespiratory capacity” of the “dynamic activity with large muscle groups” requirement has not been met;
- 4) Regularly Active, Meeting Objectives—above criteria have been met.

Persons who do not participate in any leisure-time physical activity and those who only exercise irregularly are considered “at risk” due to sedentary lifestyle. For white residents and for Nebraska adults overall, nearly 55 percent were categorized as having a sedentary lifestyle.

Diabetes

Diabetes increases the risk of cardiovascular disease by two to three times. In fact, cardiovascular disease is the leading cause of death among people with diabetes. The BRFSS of 1998-2002 indicates that 5.1 percent of adult Nebraskans have been told by their doctors that they have diabetes. Among Nebraska’s racial minorities, the result differs according to race and ethnicity (*Figure 24*).

Native Americans (10.4 percent) and African Americans (9.3 percent) indicated a much higher prevalence of diabetes in comparison with the rate for white Nebraskans (5 percent). Hispanic Americans (5.7 percent) were slightly more than white persons to report having diabetes, while Asian Americans (2.2 percent) had lower rates in comparison to other racial and ethnic groups.



Progress Toward Objectives

Substantial progress has been recorded in decreasing the death rate due to coronary heart disease among African Americans in Nebraska (*Table 9*). The 1998-2002 death rate (280.4) declined by 25 percent from the 1993-1997 baseline, still well above the Nebraska Year 2010 objective of 121.5 for African Americans. In comparison, the rate for Native Americans (435.7) increased by 6.9 percent. Although the current rate for Asian Americans met the Year 2010 Health Objectives, however, it more than doubled by a 106.2 percent. To meet the Nebraska Year 2010 Health Objectives of no more than 166 deaths per 100,000 Native Americans would reduce the current rate by 61.9 percent. The rate for Hispanic American is below the Year 2010 health Objectives, it showed a slight increase of 3.1.

Still, mortality due to strokes among African Americans (89.5 deaths per 100,00 population) in Nebraska has slightly increased by 6 percent since the 1993-1997 baseline, and far from meeting the Nebraska Year 2010 Health Objectives. To meet the Year 2010 Health Objectives of no more than 47.4 deaths per 100,000 population due to stroke, a reduction of 47 percent in stroke mortality rate will need to be achieved. Both Asian and Hispanic Americans experienced significant increases in their stroke mortality rates, thus requiring reductions of 45.9 and 42 percent in stroke mortality rates respectively, to meet Year 2010 Health Objectives.

Based on the data from the 1998-2002 Nebraska BRFSS, substantial reductions in smoking prevalence have been made among all of Nebraska's racial and ethnic groups when compared to the previous five-year period, 1993-1997. However, except of Asian Americans, reductions in rate of cigarette smoking need to be made among all other racial and ethnic groups in order to meet the 2010 health goals and objectives. Obesity is also an important risk factor associated with cardiovascular disease. Reducing the prevalence of overweight among high-risk groups would aid in reducing mortality rates overall for cardiovascular disease. Hispanic Americans and Native Americans experienced slight increases in the prevalence of obesity, while Asian Americans experienced a significant increase of 51 percent and a slight decrease of 1.8 percent for African Americans.

Since lack of physical activity is a risk factor for cardiovascular diseases, combined percentages for no physical and irregular activities for Africans Americans (67.7 percent) and Hispanic Americans (65.2 percent) places the majority of these groups within a sedentary lifestyle category and they are therefore, at risk. Substantial reductions must be made to meet the Year 2010 objectives.

Table 12
Cardiovascular Disease
Baseline, Current Data and Year 2010 Objectives
For U.S. and Nebraska Racial and Ethnic Minority Populations

U.S. and Nebraska Healthy People 2010 Goals and Objectives						
Indicator and Target Groups	Nebraska Baseline (1993-1997)	Nebraska Current Rate (1998-2002)	% Change Current vs. Baseline (NE)	Nebraska Year 2010 Objectives	National Current Rate (1998)	National Year 2010 Objectives
Deaths due to coronary heart disease/100,000 Population: (NE Total)	272.3	225.9	-17.0	121.5	208	166
White	269.4	225.5	-16.3	121.5	206	166
African American	373.9	280.4	-25.0	121.5	252	166
Native American	407.6	435.7	6.9	121.5	126	166
Asian American	74.0	152.6	106.2	26.0	123	166
Hispanic American	130.4	134.4	3.1	69.6	145	166
Deaths due to Stroke/100,000 Population: (NE Total)	60.3	57.7	-4.3	47.4	60	48
White	59.6	57.1	-4.2	47.4	58	48
African American	84.4	89.5	6.0	47.4	80	48
Native American	68.3	73.6	7.8	47.4	38	48
Asian American	36.2	60.4	66.9	32.7	51	48
Hispanic American	24.9	38.4	54.2	22.3	39	48
NOTE: Mortality Data are Age-adjusted to 2000.						
SOURCE: Mortality Data – Nebraska Vital Statistics, 1993-1997 and 1998-2002; Prevalence of Cigarette Smoking and Overweight: Nebraska Behavioral Risk factor Surveillance System, 1993-1997 and 1998-2002 ; U.S. and Nebraska 2010 Health Goals and Objectives						

CANCER

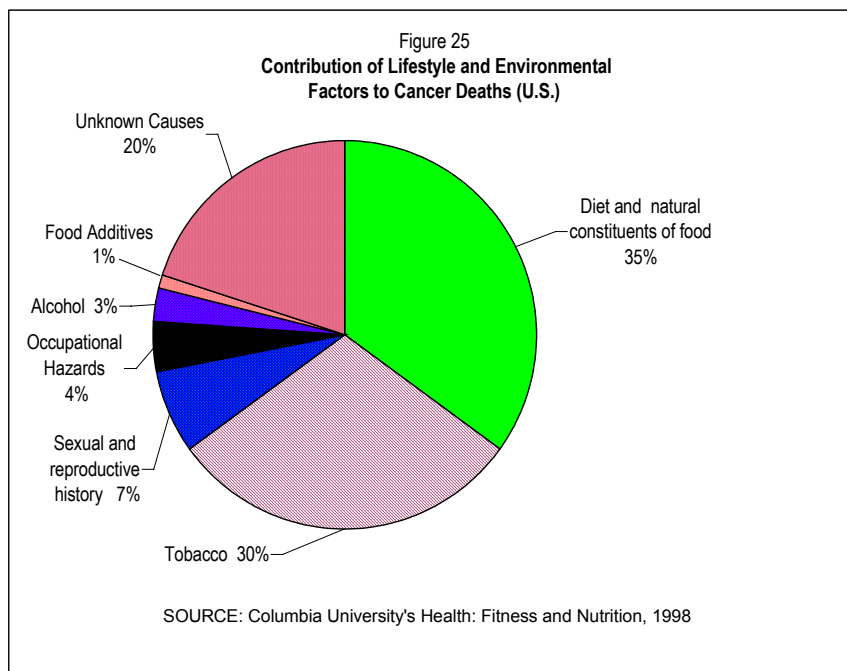
OVERVIEW OF HEALTH IMPACT

The following highlights concerning cancer are provided by the Nebraska Cancer Registry which is part of the Nebraska Health and Human services System:

- ❖ From 1996 through 2000, in an average week, about 150 Nebraska residents learn from their physician that they have cancer... and over 60 Nebraskans die from it.
- ❖ During the five-year period, 1996-2000, 42,056 Nebraska residents were diagnosed with the disease. These represent new cases of cancer (cancer incidence). Of this total, 9 percent or 3,855 occurred among those ages 0-44; 29 percent occurred among those ages 45-64 years while over 62 percent of the diagnoses were among those 65 years and older.
- ❖ During 1998-2002, at an age-adjusted mortality rate of 186.5 per 100,00 population, cancer caused the deaths of 16,885 Nebraska residents. Also during 1996-2000 cancer caused the deaths of 16,614 Nebraska residents, making it the second leading cause of death in the state, exceeded only by heart disease.
- ❖ In 2000, cancer cost Nebraska nearly \$1.1 billion per year in medical expenses, lost workdays, and premature deaths.

- ❖ Cancer mortality rates (the number of deaths per 100,000 population) are higher among African Americans (254.2) and Native Americans (219.0) than other racial or ethnic groups.
- ❖ African Americans in Nebraska are more likely to develop cancer than any other racial or ethnic group and more likely to die of the disease. The cancer mortality rate for African Americans is almost 1.4 times that of whites and 1.2 that of Native Americans.
- ❖ African Americans and Native Americans have higher lung cancer and bronchus cancer mortality rates than any other racial or ethnic group.
- ❖ According to the National Cancer Institute (NCI), “smoking is responsible for about 30 percent of all cancer deaths annually in the United States or more than 155,000 deaths each year.”
- ❖ Over 1,156,000 persons with cancer were discharged from hospitals across the nation with an average length of hospital stay of 6.7 days in 2000.

Cancer in all forms remains the number two leading cause of death (553,251 deaths attributable to this cause in 2001). Information from the American Cancer Society’s (ACS), Cancer Facts and Figures 2001, revealed that nationwide, for the year 2001 an estimated 1,268,000 new cases of cancer were diagnosed. In Nebraska, cancer also is the number two leading cause of death after heart disease, according to the Nebraska Vital Statistics Report 2001. Research consistently indicates that certain cancers can be treated and cured if and when detected early. It has also been shown that a majority of all cancer-related deaths can be attributed to lifestyle with the environment. Figure 25 shows that dietary factors, that is, natural constituents of food are responsible for about 35 percent of cancer deaths, and tobacco use which accounts for 30 percent (*Figure 25*), which represents 65 percent of all cancer causes.



Environmental pollution and other carcinogens and asbestos are also causes of cancer. Reproductive and sexual behaviors account for 7 percent of all cancer mortality. Occupational (4 percent), alcohol (3 percent) and environmental/occupational hazards (4 percent), food additives (1 percent) and unknown contributors (20 percent)- all are major causes of cancer deaths.

Changing high-risk behaviors related to smoking and high-fat diets would reduce the chances and risk of developing cancer for many people. Early detection procedures such as mammograms, Pap smears, as well as colorectal cancer screening also have potential for reducing cancer mortality.

Nationally, the five-year survival rate for all types of cancer combined is about 61 percent for white patients and about 48 percent for African Americans. Socioeconomic factors which influence patient access to and use of health care early in the disease and access to state-of-the-art treatment may account for a substantial part of this difference in survival rates.

Incidence Rates

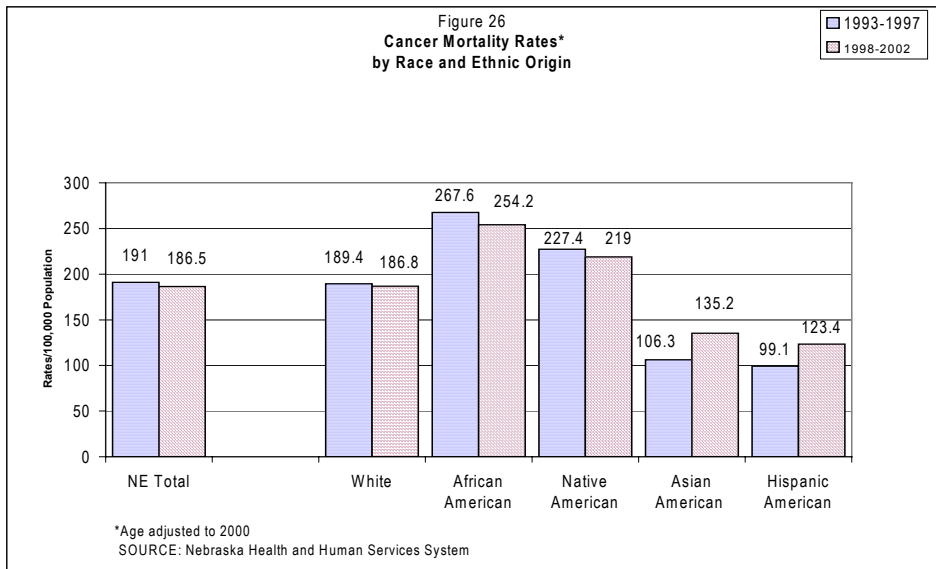
“The rate of new cancer cases and deaths for all cancers combined as well as for most of the top 10 cancer sites declined between 1990 and 1997 in the U.S.,” according to a report released by the National Cancer Institute (NCI) et al. “The report shows that the incidence rate -- the number of new cancer cases per 100,000 persons per year -- for all cancers combined declined on average 0.8 percent each year between 1990 and 1997. The greatest decline: 1.3 percent per year, occurred after 1992, the year in which incidence rates peaked. This trend reversed a pattern of increasing incidence rates from 1973 to 1992,” (National Cancer Institute et al. 2000, p. 1).

Deaths Due to Cancer

Nationwide, cancer has continued to rank second as a cause of death, with a total of 553,251 deaths (or 22.9 percent) of the preliminary total number of 2,417,762 deaths reported in 2001. The U.S. cancer death rate in 2001 was 194.3 per 100,000 population and has been gradually declining since 1990.

In Nebraska, there were 3,429 deaths attributed to cancer in 2002 at the rate of 189.3 deaths per 100,000. Cancer was also the second leading cause of death resulting in 21.8 percent of the total 15,721 Nebraska deaths in 2002. In Nebraska, cancer mortality rates for the five-year period 1998-2002 decreased slightly for African Americans and Native Americans, but increased by 27.2 and 24.5 percent for both Asian and Hispanic Americans when compared to rates for the five year period 1993-1997 (*Figure 26*).

According to the 1998-2002 age adjusted mortality rates per 100,000 population, African Americans continue to lead with 254.2 cancer deaths per 100,000 population. The death rate in the Native American community was 219.0 per 100,000. The cancer death rate among whites was 186.8 while Asian Americans and Hispanic Americans experienced rates of 135.2 and 123.4 deaths per 100,000 (*Table 13*). Thus African Americans in the state have 1.4 times the risk of dying from cancer compared to whites. Native Americans are 1.2 times more likely to die from cancer than whites, while Asian and Hispanic Americans are (0.7 times each) less likely than white Nebraskans to die from cancer.



Years of Potential Life Lost (YPLL) Due To Cancer.

In total, cancer deaths among Nebraska's ethnic and racial population amounted to 2,006.6 years of potential life lost annually (*Table 14*). The highest toll of YPLL occurred among African Americans with 1.5 times as many years of potential life lost per person as white Nebraskans. The YPLL age-adjusted rate for this group was 2,194.7 per 100,000 population. Native Americans also experienced 1.4 times as many potential years of life lost than whites.

Table 13
Cancer Mortality Rates and Relative Risk of Mortality
For Nebraska Racial/Ethnic Minority Populations

	1993-1997 Age-adjusted* Mortality Rate per 100,000 population	Relative Risk			1998-2002 Age-adjusted* Mortality Rate per 100,000 population	Relative Risk		
		Total	Males	Females		Total	Males	Females
Cancer (All Sites)								
NE Total	191.0				186.5			
White	189.4				186.8			
African American	267.6	1.4	1.6	1.2	254.2	1.4	1.4	1.3
Native American	227.4	1.2	1.2	1.2	219.0	1.2	0.8	1.5
Asian American	106.3	0.6	0.4	0.7	135.2	0.7	0.6	0.8
Hispanic American	99.1	0.5	0.4	0.6	123.4	0.7	0.6	0.7
Lung Cancer								
NE Total	51.0				50.3			
White	50.5				50.1			
African American	74.3	1.5	1.5	1.5	76.1	1.5	1.7	1.3
Native American	65.8	1.3	1.4	1.3	58.8	1.2	0.9	1.7
Asian American	14.4	0.3	0.2	0.5	44.4	0.9	0.5	1.4
Hispanic American	18.0	0.4	0.3	0.5	25.0	0.5	0.6	0.3
Colorectal Cancer								
NE Total	22.9				21.6			
White	22.8				21.7			
African American	30.2	1.4			27.4	1.3		
Breast Cancer – Females								
NE Total	29.0				24.3			
White	29.0				24.1			
African American	34.0	1.2		1.2	42.3	1.8		1.8
Native American	17.8	0.6		0.6	29.9	1.2		1.2
Asian American	6.4	0.2		0.2	14.6	0.6		0.6
Hispanic American	14.7	0.5		0.5	6.9	0.3		0.3
Cervical Cancer- Females								
NE Total	2.5				2.5			
White	2.5				2.5			
African American	3.3	1.3		1.3	2.6	1.0		1.0
Prostate Cancer- Males								
NE Total	31.1				27.5			
White	30.7				27.5			
African American	60.9	2.0	2.0		45.5	2.0	2.0	
*Age adjusted to 2000								
SOURCE: Nebraska Health and Human Services System, Vital Statistics, 1993-1997 and 1998-2002.								

Table14
Years of Potential Life Lost-Cancer
Based on 75 Productive Years of Life
For Nebraska Racial and Ethnic Minority Populations

Category	1993-1997			1998-2002		
	# of Total YPLL	Age-Adjusted YPLL Rate/ 100,000 Population	Minority-to-White Ratio*	# of Total YPLL	Age- Adjusted YPLL Rate/ 100,000 Population	Minority-to-White Ratio*
Cancer						
Nebraska Total	122,830	1,573.3		118,607	1,421.0	
White	115,655	1,548.9		111,016	1,428.1	
African American	5,993	2,475.5	1.6	5,622	2,194.7	1.5
Native American	764	1,821.1	1.2	898	1,956.5	1.4
Asian American	419	748.1	0.5	962	1,086.2	0.8
Hispanic American	1,633	855.0	0.6	2,551	903.0	0.6
Average/Year (Minorities)	1,761.8			2,006.6		
Lung Cancer						
Nebraska Total	31,932	410.3		31,370	376.0	
White	30,069	401.6		29,379	374.3	
African American	1,634	765.1	1.9	1,617	668.6	1.8
Native American	204	580.7	1.4	167	407.9	1.1
Asian American	27	64.4	0.2	207	277.9	0.7
Hispanic American	188	127.2	0.3	317	141.8	0.4
Average/Year (Minorities)	410.6			461.6		
Colorectal Cancer						
Nebraska Total	12,033	154.1		11,165	133.9	
White	11,424	152.6		10,579	135.6	
African American	501	212.3	1.4	457	186.1	1.4
Average/Year (Minorities)	100.2			91.4		
Breast Cancer – Females						
Nebraska Total	13,051	335.7		11,213	266.9	
White	12,391	334.3		10,215	261.4	
African American	594	451.3	1.3	799	568.2	2.2
Native American	26	111.5	0.3	163	559.1	2.1
Asian American	41	128.9	0.4	37	96.2	0.4
Hispanic American	185	213.0	0.6	118	110.2	0.4
Average/Year (Minorities)	169.2			223.4		
Cervical Cancer- Females						
Nebraska Total	2,006	50.5		2,055	49.6	
White	1,867	49.7		1,776	46.8	
African American	72	56.1	1.1	132	83.8	1.7
Average/Year (Minorities)	14.4			26.4		
Prostate Cancer						
Nebraska Total	2,429	62.2		2,051	51.0	
White	2,280	60.3		1,954	51.0	
African American	128	142.0	2.4	97	103.5	2.0
Average/Year (Minorities)	25.1			19.5		
*Minority Age-Adjusted YPLL Rate/100,000 divided by White Age-Adjusted YPLL Rate/100,000						
SOURCE: Nebraska Health and Human Services System, Nebraska Vital Statistics data, 1993-1997 and 1998-2002.						

LUNG CANCER

Deaths Due to Lung Cancer

Lung cancer is the leading cause of cancer deaths in Nebraska, claiming the lives of 523 males and 365 females for a total of 888 Nebraskans in 2002. Although mortality rates have risen since 1960, they have declined since 1993. Rates for men have decreased more than those for women, but men still experience death from lung cancer at close to twice the rate of women. Comparing the rates for 1998-2002 with the previous five-year period (*Table 13*), the lung cancer death rate for Asian Americans exhibits a substantial increase of 208.3 percent, while African Americans experienced an increase of 2.4 percent.

As in the previous five-year period, African Americans continued to have the highest lung cancer death rate of any racial/ethnic population in Nebraska, with an age-adjusted rate of 76.1 per 100,000 population (an average of close to 31 deaths per year). The risk of lung cancer death among African Americans in Nebraska is 1.5 times the risk for whites. As in the general population, death rates among African American men are close to three times as high as the rate for women. Lung cancer mortality rate for Native Americans (58.8) was slightly lower in 1998-2002 than in the previous five-year period (65.8). The relative risk of lung cancer death slightly declined from 1.3 in 1993-1997 to 1.2 for 1998-2002. Sixty-two percent of the deaths among this ethnic group occurred in men. Lung cancer mortality rates for Hispanic (25.0) Nebraskans were relatively low during 1998-2002. Asian Americans (44.4) experienced a much higher lung cancer mortality rate in 1998-2002 than in 1993-1997. Relative risk for Asian Americans in Nebraska increased to 0.9 times the white rate.

Years of Potential Life Lost (YPLL) Due to Lung Cancer

In Nebraska, during the five-year period, 1998-2002, an average of 461.6 years of potential life was lost to lung cancer among African Americans, Native Americans, Asian Americans and Hispanic Americans, combined. African Americans lost 1.8 times as many years of potential life per person to this disease as did white Nebraskans. The YPLL age-adjusted rate for this group was 668.6 years per 100,000 population. Native Americans experienced a YPLL age-adjusted rate of 407.9 years per 1,00,000 due to lung cancer and lost 1.1 times as many years as whites (*Table 14*).

Risk Factors Associated with Lung Cancer

Smoking: Nationwide, cigarette smoking is the primary cause of “Lung cancer deaths in both men and women. There were an estimated 164,100 new cases of lung cancer and an estimated 156,900 deaths from lung cancer in the United States in 2000,” (American Lung Association, ALA, 2000, p.1). In 2002, a staggering 430,700 deaths were expected in the U.S. from tobacco use. In spite of this, 46.5 million adults were current smokers in 2000 according to the American Cancer Society, (ASC).

COLORECTAL CANCER

In general, “ACS recommends that both men and women get cancer-related screening during a regular doctor’s checkup. It should include examination for cancers of the thyroid, testicles, ovaries, lymph nodes, oral cavity, and skin, as well as health counseling about tobacco, sun exposure, diet and nutrition, risk factors, sexual practices, and environmental and occupational exposures,” (American Cancer Society, 2002 p.).

Concerning colorectal cancer (cancer of the Colon and Rectum), ACS recommends that men and women ages 50 years and older should arrange for and undergo one of the following testing practices:

- “Yearly fecal occult blood test (FOBT) (- using the take-home multiple sample method).
- Flexible sigmoidoscopy every 5 years
- Yearly fecal occult blood test plus flexible sigmoidoscopy every 5 years (a method preferred over either of the above two tests alone).
- Double-contrast barium enema every 5 years, and
- Colonoscopy every 10 years,”(ibid.)

Deaths Due to Colorectal Cancer

According to the American Society of Colon and Rectal Surgeons, (ASCRG) colorectal cancer is the second most common cancer in the U.S., striking 140,000 people annually, and causing 60,000 deaths. This rate accounts for 11 percent of all cancer deaths. “Over 148,000 people in the U.S. were expected to have been diagnosed with colon or rectal cancer in 2002,” (Evanston Northwestern Healthcare, 2002, p. 7). Colorectal cancer death rates decreased somewhat for both white persons and for African Americans. In 1998-2002, the mortality rate for African Americans was down 9.3 percent from the 1993-1997 rate (*Table 13*). The current rate for African Americans (27.4) is also higher than the rate for white residents of the state (21.7). The relative risk for this population is 1.3 times the risk for whites. At a YPLL age-adjusted rate of 186.1/100,000, an average of 19.4 years of potential life were lost annually among African Americans who died from colorectal cancer over the last five-year period (*Table 14*). African Americans lost 1.4 times as many years of potential life to this disease, per person, as did white Nebraskans.

Risk Factors

Diet and other risk factors. Researchers have shown that age, personal history and family history of colorectal cancers and inflammation of the bowels are contributory factors to the incidence of colorectal cancer. In addition, high levels of inactivity, poor diet or a diet laden with saturated fat and low fiber, and coupled with inadequate consumption of fruits and vegetables contribute to the high incidence of this disease (Healthlink Medical College of Wisconsin, 2003).

BREAST CANCER

Deaths due to Breast Cancer

Nationwide, breast cancer is the most commonly diagnosed cancer and the second leading cause of cancer deaths among women. In the last ten years, breast cancer mortality rates have declined both in Nebraska and in the U.S., with rates declining by 24 percent in Nebraska since 1990. The breast cancer death rate for white women in Nebraska decreased by 16.9 percent in 1998-2002 compared to the previous five years (*Table 13*). For African American women, however, the rate increased by about 24.4 percent. African American women (42.3 deaths per 100,000 population) in Nebraska also had a higher mortality rate from breast cancer than white women (24.1), resulting in a relative risk of 1.8. The breast cancer death rate for Native Americans shows an increase of approximately 68 percent from 17.8 in 1993-1997 to 29.9 during 1998-2002. Thus indicating that at a relative risk rate of 1.2, Native American females are 1.2 times as likely as whites to die from breast cancer.

Years of Potential Life Lost (YPLL) Due to Breast Cancer

The YPLL per 100,000 population was 2.2 times higher for African American women in the state (*Table 14*) as it was for white women. In 1998-2002, African American women lost an average of 159.8 years of potential life annually to breast cancer. Native American women lost an average of 559.1 years of potential life each year to breast cancer.

Risk Factors Associated With Breast Cancer

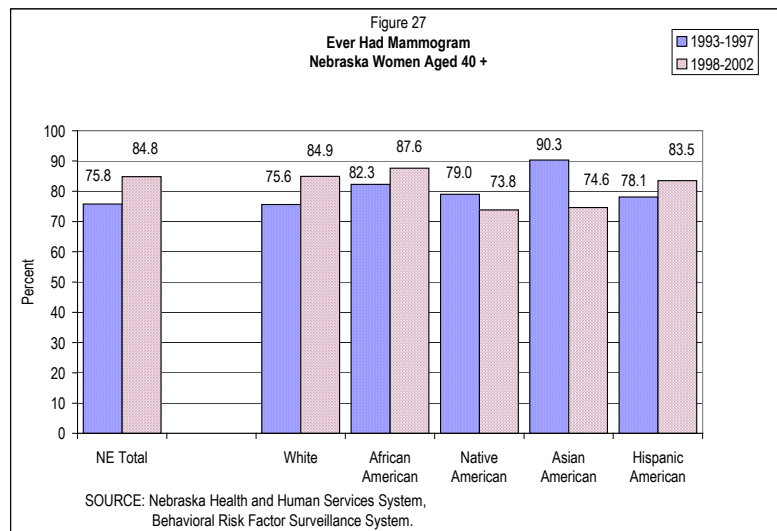
Mammography and Breast Self-Examinations

Many breast cancer risk factors such as age, family history of breast cancer, reproductive history, previous breast disease, and race/ethnicity are not subject to intervention. However, women that are overweight, and who have already experienced menopause, is one risk factor that can be addressed. Moreover a lack of screening is another risk factor that can be eliminated. Early detection and treatment can reduce deaths due to breast cancer by as much as 30 percent. To this effect:

The American Cancer Society recommends that women age 40 and older have an annual mammogram, an annual clinical breast examination by a health care professional, and perform monthly breast self-examination. Women ages 20-39 should have a clinical breast exam performed by a health care professional every three years and should perform monthly breast self-examination...When a woman has a suspicious lump or when a suspicious area is identified on a mammogram, diagnostic mammography can help determine whether additional tests are needed and if there are other lesions that are too small to be felt in the same or the opposite breast. All suspicious lumps should be biopsied for a definitive diagnosis, (Cancer Facts & Figures 2000, p.8).

Mammograms

Nationwide, the percentage of women 40 years and older who had a mammogram within the past 2 years varied. In 2002, 70.3 percent of U.S. women 40 years and older, reported having had mammography in the past 2 years. In 2000, African American (67.9 percent) and Hispanic American (61.4 percent) women, 40 years and older reported having had mammography within the past 2 years, as compared with white women (72.1 percent), according to the National Center for Health Statistics, (NCHS).



Among female respondents to the Nebraska BRFSS who were age 40 and older, the proportion who said they had ever had a mammogram varied somewhat by race and ethnicity. However, the majority of respondents in each group stated they had a mammogram at sometime (*Figure 27*). According to the 1998-2002 Nebraska BRFSS, African American women were more likely than other racial groups to report ever having a mammogram (87.6 percent). Close to 88 percent of African American

women age 40 and older self-reported they ever had a mammogram, compared to 84.8 percent of white women. Among Hispanic American women in this age group, 83.5 percent stated they ever had this test. Among Asian American women 40 years of age and older, 74.6 percent stated they ever had this test, as did 73.8 percent of Native American women.

CERVICAL CANCER

Deaths Due to Cervical Cancer

Cervical cancer is one of the most frequently occurring cancers among women. "Cervical cancer is nearly 100 percent preventable (if it is detected early), yet according to the American Cancer Society, an estimated 13,000 new cases of invasive cervical cancer will be diagnosed in 2002 and about 4,100 women will die of the disease," (National Cervical Cancer Coalition, (NCCC) 2002, p.1). With increased routine Pap screening for early detection and other modern techniques of treatment, deaths due to cervical cancer have been reduced over the last 40 years. The cervical cancer death rate among African American women in Nebraska decreased from 3.3 per 100,000 women in 1993-1997 to 2.6 in 1998-2002 (*Table 13*). Relative risk of death from cervical cancer decreased from 1.3 times the risk (1993-1997) for white women to a relative risk of 1.0 in the five-year period 1998-2002.

Years of Potential Life Lost (YPPL) Due to Cervical Cancer

The age-adjusted YPLL rate lost to cervical cancer among African American women was 83.8 years per 100,000. Among this group, 132 years or average of roughly 26.4 years of potential life were lost each year due to cervical cancer deaths in 1998-2002 (*Table 14*). African American women lost 1.7 times as many years of potential life per person as did white Nebraskans.

Risk Factors Associated with Cervical Cancer

Age. The risk of cervical cancer increases with age. Age therefore influences both cervical cancer incidence and survival rate. While younger women are more likely to be diagnosed with this form of cancer, older women are most often diagnosed at later stages of the disease and are more likely to die as a result of it. About 70 percent of cervical cancer deaths occur in women aged fifty and older.

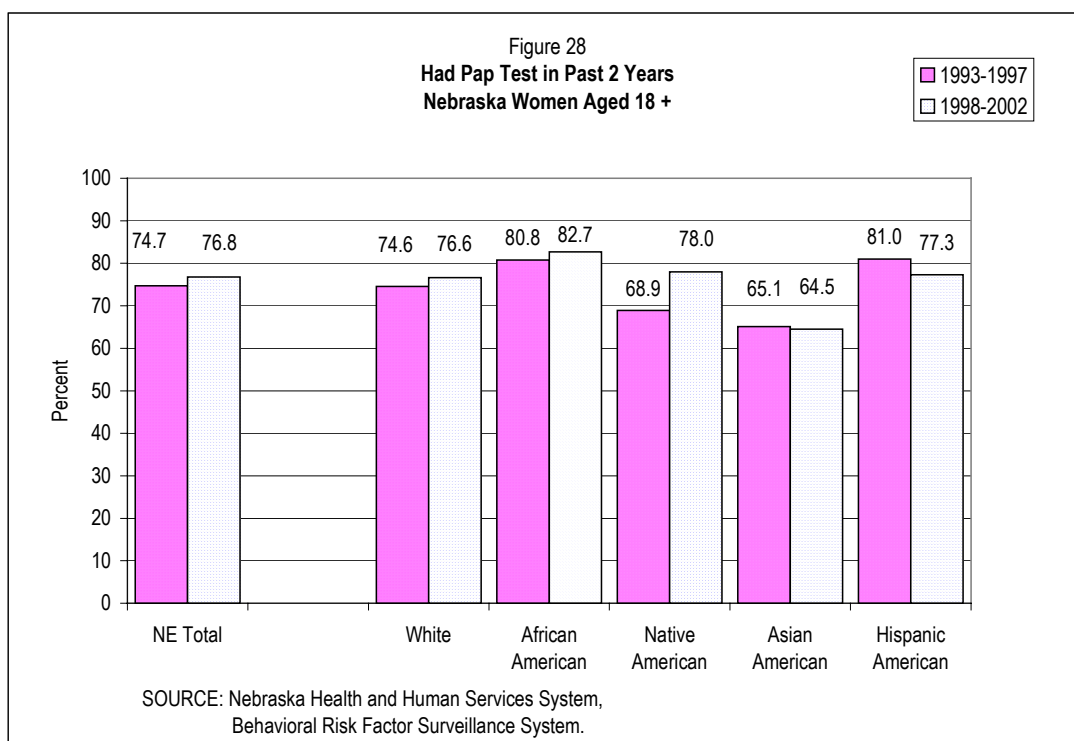
Sexual Activity. The risk of developing cervical cancer is higher in women who experienced sexual intercourse at a very early age and in those who had or have many sex partners. The risk of cervical cancer is also linked to sexually transmitted diseases, particularly the human papillomavirus (McIntosh, 2003).

Smoking. Smoking has been shown by various studies to be associated with causes of cervical cancer.

Socioeconomic Status. Low socioeconomic status is also a factor in this disease.

Lack of Screening and Early Detection. White women are more likely than African American women to be diagnosed with cervical cancer at an early stage. Fifty-four percent of white females and 44 percent of African American women with cancer are diagnosed at localized stages. The American Cancer Society, (ACS) recommends that “all women should begin cervical cancer screening about 3 years after they begin having vaginal intercourse, but no later than when they are 21 years old. Screening should be done every year with the regular Pap test or every 2 years using the newer liquid-based Pap test,” (American Cancer Society, 2002, p. 2). At age 30, the screening should be done every 2 to 3 years and after age 30, the screening should be done every 3 years – but no more frequently, the ACS advised.

Based on the 1998-2002 BRFSS, about three-fourths of all Nebraska women age eighteen years and older (76.8 percent) stated that they had a Pap test during the past two years. Seven percent had never had this test done. African American women (82.7 percent), Native American women (78 percent), and 77.3 percent of Hispanic American women were more likely than Nebraska women in general (76.8 percent) to report having a Pap test within the past two years. Nearly 77 percent of white Nebraska women reported having had Pap screening in the last 2 years. Among Asian American women 64.5 percent have had a Pap test within the past two years (*Figure 28*).



PROSTATE CANCER

According to the American Cancer Society, “an estimated 198,100 new cases were diagnosed in the United States during 2001. The rate of prostate cancer remains significantly higher in African American men than in white men,” (Natural Impact.com, 2002 p.1). Among men prostate cancer is the most common cancer diagnosed, and the second leading cause of death from cancer,” (Smith et. al, 2001, pp.38-75). Compared to the rate among white and Korean men (24.2), prostate cancer incidence rates remain significantly higher in black men (180.6 per 100,000 population). Between 1989 and 1992, prostate cancer incidence rates increased dramatically, probably due to earlier diagnosis in men without any symptoms, by increased use of prostate-specific antigen (PSA) blood test screenings. Prostate cancer incidence rates are now declining; rates peaked in 1992 among white men and in 1993 among black men.

Deaths. In 2002 an estimated 30,200 deaths occurred in the United States due to prostate cancer, making it the second leading cause of cancer death in men. Although mortality rates are declining among white and black men, rates in black men remain more than twice as high as rates in white men. Although the prostate cancer mortality rate for whites has decreased from 30.7 in 1993-1997 to 27.5 in 1998-2002 in Nebraska, the mortality rate among African Americans in the state (45.5) experienced a 25.3 percent decrease from 60.9 in the previous five-year period (*Table 13*). The latest rate is nearly twice as high as the rate for white males in Nebraska. Since prostate cancer deaths generally occur 70 percent of the time among men over 65 years, the number of YPLL due to prostate cancer was fairly low for all. However, the estimated number of years lost per person is twice as high for African American men as for white men in the state.

Risk Factors

Several studies aimed at discovering the actual causes of prostate cancer have been conducted, but findings have not been sufficient to pinpoint the exact causes of cancer.

According to CDC “about 70 percent of all diagnosed prostate cancers are found in men aged 65 years or older. The prostate cancer death rate is higher for African American men than for any other racial or ethnic group,” (CDC, 2003. p. 1). Recent genetics studies suggest that prior family pre-dispositions could be responsible for cancer five to ten percent of the time. Other international studies indicate that dietary fats may also contribute to the incidence of prostate cancer.

Early Detection. In the last two decades, the survival rate for prostate cancer has increased from 67 to 97 percent, according to the CDC. According to national data, men with prostate cancer have an excellent chance of survival if the disease is diagnosed and treated early. The *American Cancer Society's Guideline Statement* recommends that

Both Prostate-Specific Antigen (PSA) and Digital Rectal Examination (DRE) should be offered annually, beginning at age 50 years, to men who have at least a 10-year life expectancy. Men at high risk should begin at age 45 years...Information should be provided to men regarding potential risks and benefits of early detection and treatment of prostate cancer. Men at even higher risk, due to multiple first-degree relatives (a first-degree relative is defined as a father, brother or son) affected at an early age, could begin testing at age 40...Men who choose to undergo testing should begin at age 50 years. However, men in high-risk groups, such as African Americans and men who have first-degree relative diagnosed with prostate cancer at a young age, should begin testing at age 45 (American Cancer Society, 2002 p.3).

The ACS also suggests that men who know they are at high risk for prostate cancer--including African American men who have a strong familial history of prostate cancer-- should not wait until they turn 50, but rather undergo these tests earlier.

Progress Toward Objectives

One Nebraska 2010 health goals and objective is to reduce overall deaths due to lung cancer among all racial and ethnic groups (*Table 15*). The latest lung cancer mortality for African Americans (76.1) represents a slight increase of 2.4 percent from the 1993-1997 baseline, thus making the rate still very high for this group. However, to achieve the 2010 objective for lung cancer, an additional decrease of close to 49 percent would be needed. For Native Americans (58.8), the lung cancer mortality is high compared to the Nebraska 2010 health goals and objectives and would require a 33.7 percent reduction. Neither Asian Americans (44.4), nor Hispanics (25.0) met the Nebraska health goal and objective and would both require 12.2 and 46.8 percent reductions.

Table 15
Cancer
 Baseline, Current Data and Year 2010 Objectives
 For U.S. and Nebraska Racial/Ethnic Minority Populations

U.S. and Nebraska Healthy People 2010 Goals and Objectives							
Indicator and Target Groups	Nebraska Baseline (1993-1997)	Nebraska Current Rate (1998-2002)	% Change Current vs. Baseline (NE)	Nebraska Year 2010 Objectives	National Data Year	National Current Rate 1998	National Year 2010 Objectives
Deaths due to lung cancer/ 100,000 Population:	51.0	50.3	-1.4	39.0	1998	57.6	44.9
White	50.5	50.1	-0.8	39.0	1998	57.5	44.9
African American	74.3	76.1	2.4	39.0	1998	66.7	44.9
Native American	65.8	58.8	-10.6	39.0	1998	38.2	44.9
Asian American	14.4	44.4	208.3	39.0	1998	29.3	44.9
Hispanic American	18.0	25.0	38.9	13.3	1998	22.7	44.9
Prevalence of cigarette smoking Among adults age 18 and older (%)	19.2	17.1	-10.9	12	1998	24	12
White	19	17	-10.5	12	1998	24	12
African American	23.4	19.2	-17.9	12	1998	25	12
Native American	40.6	14.2	-65.0	12	1998	40	12
Asian American	14.1	11.9	-15.6	12	1998	14	12
Hispanic American	19.1	16	-16.2	12	1998	19	12
Deaths due to breast cancer/1,000, 000 females	29.0	24.3	-16.2	20.7	1998	25.9	20.7
White	29.0	24.1	-16.2	20.7	1998	28.4	20.7
African American	34.0	42.3	24.4	20.7	1998	36.4	20.7
Native American	17.8	29.9	67.9	20.7	1998	*	
Asian American	6.4	14.6	128.1	20.7	1998	*	
Hispanic American	14.7	6.9	-113.0	12.0	1998	15.0	12.0
Percent of women age 40 and older who had a mammogram in past 2 years	74.7	76.8	2.8	75		67	70
White women	74.6	76.6	2.6	75	1999	67	70
African American women	80.8	82.7	2.4	75	1999	66	70
Native American	68.9	78.0	13.2	75	1999	45	70
Asian	65.1	64.5	-0.9	75	1999	61	70
Hispanic American women	81.0	77.3	-4.6	75	1999	61	70
Deaths due to cervical cancer/100,000 Females, NE	2.5	2.5	0	2.0	1998	3.9	2.0
African American women	3.3	2.6	21.2	2.0	1998	6.0	2.0
Percent of women who have ever had a Pap test.	74.7	76.8	2.8	90	1998	92	98
White women	74.6	76.6	2.7	90	1998	93	98
African American women	80.8	82.7	2.4	90	1998	94	98
Native American women	68.9	78.0	13.2	90	1998	88	98
Asian American women	65.1	64.5	-0.9	90	1998	88	98
Hispanic American women	81.0	77.3	-4.6	90	1998	75	98
NOTE: Mortality Data are Age-adjusted to 2000.							
* Fewer than 5 deaths over the five-year period 1994-1998.							
SOURCE: Mortality Data – Nebraska Vital Statistics, 1993-1997 and 1998-2002; Prevalence of Cigarette Smoking and Overweight: Nebraska Behavioral Risk factor Surveillance System, 1993-1997 and 1998-2002 ; U.S. and Nebraska 2010 Health Goals and Objectives							

To help reduce the incidence of lung cancer, cardiovascular and other diseases, African Americans, Native Americans, Asian and Hispanic Americans have been targeted for reductions in cigarette smoking. Based on data from the BRFSS (1998-2002), substantial reductions in smoking prevalence would be required to reach the Year 2010 objectives: 37.5 percent for African Americans, 15.5 percent for Native Americans, and 25 percent for Hispanic Americans. Asian Americans met the Year 2010 objectives. Compared to the Nebraska baseline 1998-2002 breast cancer mortality rates for African American and Native American women will need to be reduced by 51 and 30.8 percent to achieve the year 2010 objective.

Increasing the rate at which women receive cancer screening should help to reduce the number of breast cancer cases diagnosed at late stages of development and mortality as well. The percentage of African American women who have had a mammogram in the past 2 years was 82.7 in 1998-2002 and thus achieved the objective set for the year 2010. Similarly, the percentage of Native American women who have had a mammogram in the past 2 years was 78.0 percent in 1998-2002 and thus achieved the objective set for the year 2010. Hispanic (77.3 percent) and Asian American (64.5 percent) women who had received this screening were also within range of attaining the target rate of 75 percent.

Cervical cancer death rates among African American women in Nebraska were down slightly (21.2 percent) in 1998-2002, compared to the baseline. This current rate of 2.5 deaths per 100,000 women needs a 20 percent reduction to achieve the Nebraska target of no more than 2.0 deaths per 100,000. Increasing the rate at which women receive cancer screening should aid in the reduction of cervical cancer deaths. Based on results of the 1998-2002 BRFSS, 82.7 percent of African American women, 78.0 percent of Native American women and 77.3 percent of Hispanic American women had ever had a Pap test to screen for cervical cancer. However, to achieve the Nebraska objective of at least 90 percent of women receiving this screening, an increase of 8.8, 15.4, 39.5 and 16.4 percent in the screening rate would be required for African, Native, Asian and Hispanic American women.

MATERNAL AND CHILD HEALTH

OVERVIEW OF HEALTH IMPACT

The goal of the Maternal, Infant and Child Health objectives is to improve the health and wellbeing of women, infants, children, and families throughout the nation, according to the Nebraska 2010 Health Goals and Objectives. The U.S. Department of Health and Human Services' document: "Race and Health: Infant Mortality: How to Reach the Goals," updated in September 1999 states the main goal as the elimination of disparities in infant mortality rates. Infant mortality is an important measure of a nation's health and a worldwide indicator of health status. Although infant mortality in the U.S. has declined steadily over the past several decades and is at a record low of 6.9 per 1,000 live births (2000 data), the U.S. still ranks 28th in infant mortality when compared with other industrialized nations. Th U.S. was ranked 24th in 1996.

To reduce infant mortality, the U.S. Department of Health and Human Services provided the following suggestions:

“To achieve further reductions in infant mortality and morbidity, the public health community, health care providers, and individuals must focus on modifying the behaviors, lifestyles, and conditions that affect birth outcomes, such as smoking, substance abuse, poor nutrition, other psychosocial problems (e.g., stress, domestic violence), lack of prenatal care, medical problems, and chronic illness,” (U.S. Department of Health and Human Service 1999, p.1).

Medical advances and improved access to medical care have resulted in a decline in infant mortality rates in all segments of the population over the past fifty years. However a higher proportion of infants who are of racial or ethnic origin die before their first birthdays compared with deaths among white infants. Birth defects is the leading cause of death among Nebraska infants, accounting for about one-quarter of the 858 total infant deaths from 1998-2002. However, the impact of birth defects varies by race and ethnic origin. In the five-year period, 1998-2002, birth defects contributed about one-quarter (24.8 percent) of the 858 total infant deaths in Nebraska and about one-third (27.9 percent) among whites; 8.3 percent among African Americans, 30.7 percent among Asians, 25 and 13.8 percent among Hispanics and Native Americans(*Table 16*).

Birth defects are more commonly reported as a cause of death among Hispanic, Asian and white infants, while Sudden Infant Death Syndrome (SIDS) accounts for a greater proportion of African American (16.7 percent) and Native American (13.8 percent) infant deaths. Prematurity is listed more frequently as a cause of death for African American (15 percent) infants than for other racial/ethnic groups, while accidents are more a common cause of death for Native American (10.3 percent) babies. Asian American babies die from maternal complication and SIDS 15.4 percent of the time, in data obtained during 1998-2002. With these small percentages, it is difficult to draw conclusions for Asian deaths and to a lesser extent, native Americans.

Table 16
Leading Causes of Infant Deaths
By Race/Ethnic Origin in Nebraska
1998-2002

Cause of Death	Percent of All Infant Deaths					
	NE Total (N = 858)	White (N = 692)	African American (N = 120)	Native American (N =29)	Asian American (N = 13)	Hispanic American (N = 96)
Birth Defects	24.8%	27.9%	8.3%	13.8%	30.7%	25%
Sudden Infant Death Syndrome (SIDS)	13.3%	12.7%	16.6%	13.8%	-	10.4%
Prematurity	8.9%	7.9%	15.0%	-	-	11.5%
Maternal Complications	8.3%	7.5%	13.3%	-	-	11.5%
Other Respiratory Conditions	7.3%	7.4%	7.5%	-	-	6.3%
Other Perinatal Conditions	6.9%	7.1%	7.5%			6.3%
SOURCE: Nebraska Health and Human Services System, Vital Statistics						

Maternal Mortality

Nationwide, in 2000, the maternal mortality rate for African American women (0.6 per 100,000 population) was 3 times that for white women (0.2 maternal deaths per 100,000 population). The rate was 0.5 per 100,000 population for Hispanics, according to the National Center for Health Statistics (NCHS).

Infant Mortality

There are substantial differences among racial groups with regard to infant mortality (*Figure 29*). Infant mortality rates for African Americans (17.1 per 1,000 live births) were approximately 2.3 times the rate for whites in Nebraska (7.5) over the five-year period 1993-1997 (*Table 17*). For the five-year period 1998-2002, the infant mortality rate for African Americans was 17.9 per 1,000 live births, or 2.8 times the rate for white Nebraskans, which was 6.3. The latest (1998-2002) Nebraska infant mortality rate (17.9) for African American babies far exceeds the overall national rate (6.9 deaths per 1,000 live births).

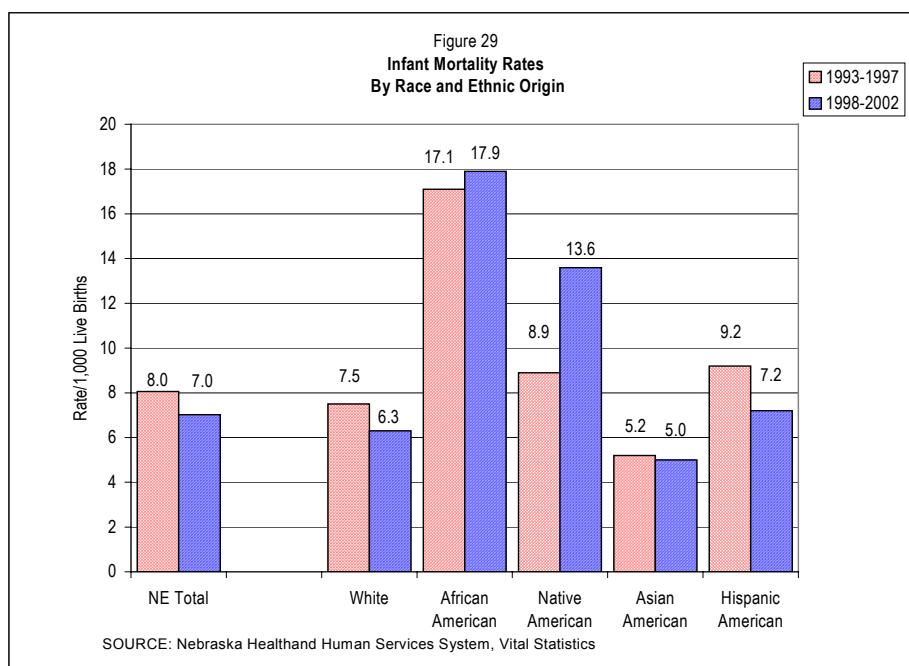


Table 17
Infant Mortality
Rates and Relative Risk of Mortality and Inadequate Prenatal Care
For Nebraska Racial and Ethnic Minority Populations

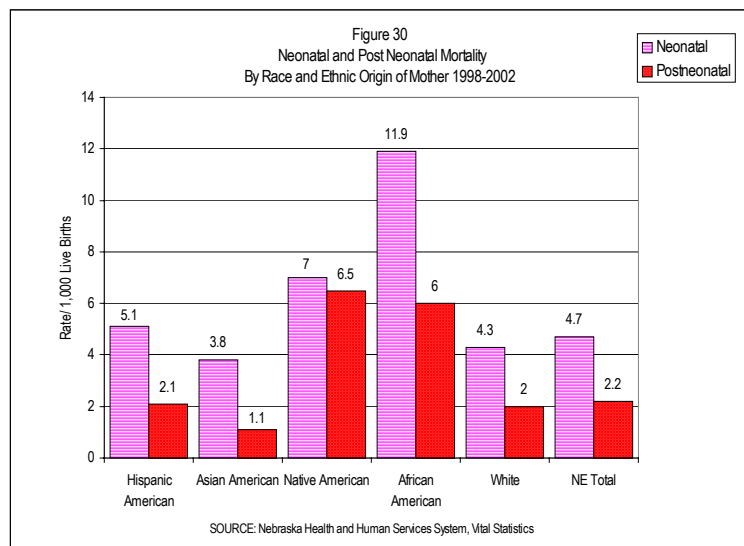
Category	1993-1997		1998-2002	
	Rate per 1,000 Live Births	Relative Risk	Rate per 1,000 Live Births	Relative Risk
Infant Mortality				
NE Total	8.1		7.0	
White	7.5	1.0	6.3	1.0
African American	17.1	2.3	17.9	2.8
Native American	8.9	1.2	13.6	2.2
Asian American	5.2	0.7	5.0	0.8
Hispanic American	9.2	1.2	7.2	1.1
Neonatal Mortality				
NE Total	5.2		4.7	
White	4.9	1.0	4.3	1.0
African American	10.9	2.2	11.9	2.8
Native American	2.8	0.6	7.0	1.6
Asian American	3.6	0.7	3.8	0.9
Hispanic American	6.4	1.3	5.1	1.2
Post Neonatal Mortality				
NE Total	2.8		2.2	
White	2.6	1.0	2.0	1.0
African American	6.1	2.3	6.0	3.0
Native American	6.2	2.4	6.5	3.3
Asian American	1.5	0.6	1.1	0.6
Hispanic American	2.8	1.1	2.1	1.1
SOURCE: Nebraska Health and Human Services System, Vital Statistics.				

Table 17 A
Infant Health
Rates and Relative Risk of Mortality and Inadequate Prenatal Care
For Nebraska Racial and Ethnic Minority Populations

Category	1993-1997		1998-2002	
	Rate per 1,000 Live Births	Relative Risk	Rate per 1,000 Live Births	Relative Risk
Low Birth Weight				
NE Total	63.2		68.0	
White	59.8		63.9	
African American	119.2	2.0	129.1	2.0
Native American	64.0	1.0	68.0	1.1
Asian American	69.7	1.2	81.3	1.2
Hispanic American	60.2	1.0	64.5	1.0
Mothers Receiving First Trimester Prenatal Care (%)				
NE Total	83.5		83.3	
White	84.9		84.8	
African American	70.2	0.8	69.8	0.8
Native American	64.1	0.7	65.8	0.7
Asian American	78.2	0.9	81.4	0.9
Hispanic American	65.4	0.7	68.1	0.8
Inadequate Prenatal Care (%) Based on Kotelchuk Index Score*				
NE Total	9.9		10.3	
White	8.8		9.0	
African American	22.2	2.5	22.2	2.5
Native American	28.4	3.2	26.4	2.9
Asian American	13.2	1.5	10.6	1.2
Hispanic American	24.2	2.8	21.3	2.4
*Inadequate Kotelchuk Index Score (for definition of Kotelchuk Index, please see glossary of terms and abbreviations): Baseline-1993-1997; Current 1998-2002. SOURCE: Nebraska Health and Human Services System, Vital Statistics.				

Among Native Americans in Nebraska, the 1993-1997 infant mortality rate was 8.9 per 1,000 live births, compared to the latest five-year period (1998-2002) rate of 13.6. The relative risk was 2.2 times as high as that of whites. There was an increase of 52.8 percent in the mortality rate over the ten-year period 1993-2002. The latest Nebraska rate is 31.6 percent higher than the national infant mortality rate for Native Americans (9.3). The Hispanic infant mortality rate for the 1998-2002 period was 7.2, indicating a decrease of –21.7 percent from the previous period. This rate is 1.1 times as high as the rate for white babies during this period. The infant mortality rate for Asian Americans over the 1998-2002 period, though based on a small number, was 5 deaths per 1,000 live births, which indicated a slight decrease over the 1993-1997 period. Relative risk of infant mortality for this group was 0.8 times the white rate.

“Neonatal” deaths are deaths of infants less than 28 days of age. “Post-neonatal” deaths refers to deaths of infants from 28 days of age up to age one year. The greatest number of infant deaths generally occurs during the first 28 days of life. In Nebraska, the total number of infant deaths from 1998-2002 was 580. The rate of 4.7 per 1,000 live births was a decrease of 9.6 percent from the 1993-1997 rate. The neonatal death rate had decreased by 9.6 percent, while the postneonatal death rate (2.2) was down by –21.4 percent from the 1993-1997 rate.



For African Americans, two-thirds or 66.7 percent of the infant deaths occurred in the neonatal period (*Figure 30*). There was an increase in the neonatal (11.9) and a slight decrease in the post-neonatal (6.0) death rates for these babies in 1998-2002 from the previous five years (*Table 17*). However, the neonatal death rate for African American babies was by far the highest for any racial/ethnic group in Nebraska and almost three times (2.8), the white rate. The post-neonatal death rate was three times the rate for white babies and higher than rates for all other racial/ethnic groups except Native Americans.

Unlike other racial and ethnic groups in Nebraska, for Native Americans the post-neonatal death rate (6.5 in 1998-2002) was about the same as the neonatal rate (7.0). While the neonatal infant mortality rates increased sharply by 150 percent in 1998-2002, only a slight increase was noted for postneonatal infant mortality rate. Still, the post-neonatal death rate for Native American babies exceeded corresponding rates for all other racial and ethnic groups in Nebraska and was 3.3 times the rate for white babies. (*Table 17*).

For Hispanic Americans, approximately seven out of ten infant deaths occurred in the first 28 days of life. The neonatal mortality rate in 1998-2002 (5.1 infant deaths per 1,000 live births) was the third highest rates behind African American and Native American newborns. The post-neonatal death rate for Hispanic American babies (2.1) was about the same rate as for white

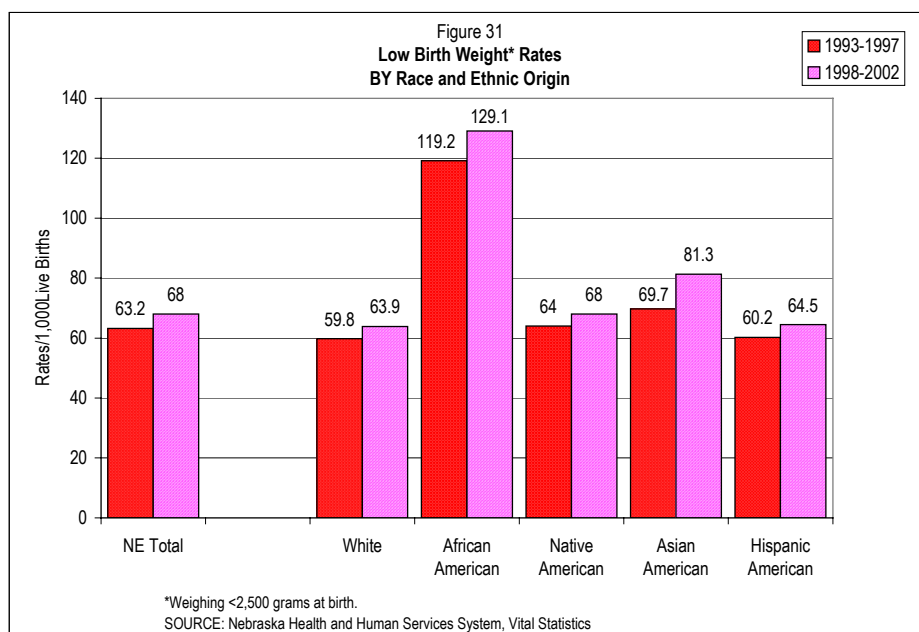
infants (2.0). There were 13 deaths of Asian American infants recorded during the five-year period 1998-2002, with the majority of these deaths occurring during the neonatal (10) at the rate of 3.9 deaths per 1,000 live births, while three occurred during the postneonatal period.

RISK FACTORS

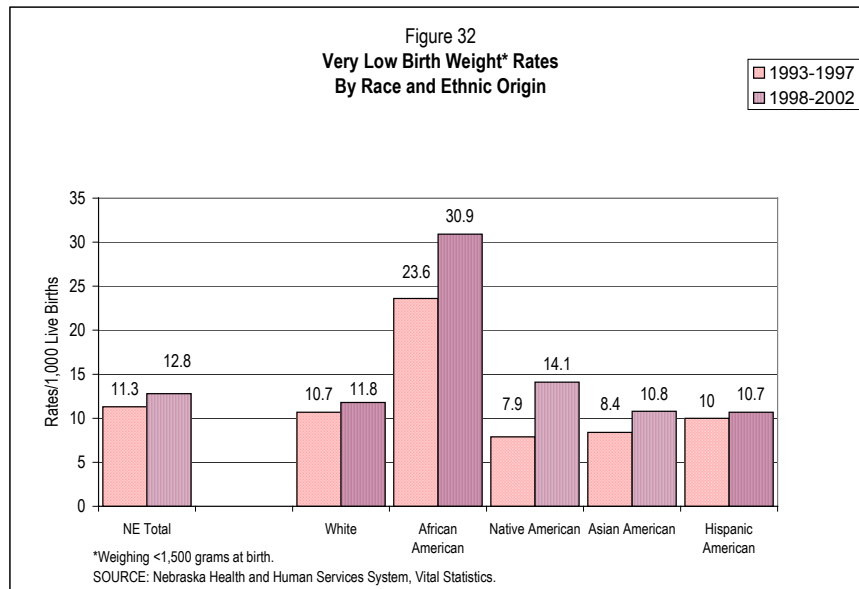
Low Birth Weight (LBW)

When compared with infants of normal birth weight, low birth weight babies (weighing less than 2,500 grams or 5.5 pounds) are five to ten times as likely to die during the first year of life. In addition, pre-term low birth weight infants are about three times more likely to die than full-term low birth weight infants. In Nebraska, although the 8,318 low birth weight babies born in 1998-2002 comprised about 7 percent of all births (122,275), these infants accounted for 560 or 65 percent of the total 858 infant deaths in the five-year period. The mortality rate among low birth weight infants averaged 67.3 per 1,000 births.

In addition to excess mortality associated with low birth weight and prematurity, these infants who survive the neonatal period are at greater risk for developmental delays, chronic illness, and prolonged and/or frequent hospitalizations. Risk factors associated with low birth weight, prematurity and “problem” deliveries include: young or advanced maternal age, poverty, smoking, alcohol or substance abuse, inability to obtain health care, and other health problems. There were substantial differences in prevalence of low birth weight by race or ethnic origin in Nebraska (*Figure 31, Table 17A*). The 1998-2002 rate of low birth weights increased by 8.3 percent for African Americans (129.1 per 1,000 live births compared to 119.2 for 1993-1997). The rates for whites (63.9), Native Americans (68.0), and Hispanic Americans (64.5) in the current five-year period all indicated a gradual upward trend when compared with the same rates over the previous five-year period. For Asian Americans (81.3), the rate increased by 16.6 percent from 69.7 during 1993-1997. Native Americans gained an increase of 6.3 percent while Hispanics recorded an increase of 7.1 percent in the rate of low birth weights, compared to the increase for whites (6.9 percent).



Infants weighing less than 1,500 grams at birth (3 pounds, five ounces) are considered very low birth weight (VLBW). For the five-year period 1994-1998, there were 11.8 very low weight births per 1,000 live births among whites. African Americans (30.9) showed an increase of nearly 31 percent compared to the 1993-1997 rate of 23.6, and were two to three times as likely as any other racial or ethnic group in the state to deliver VLBW babies (*Figure 32*). Rates for very low weight births rose for all racial/ethnic groups in 1998-2002 compared to 1993-1997.



Previous studies by the American Journal of Preventive Medicine (AJPM), have found that the higher prevalence of VLBW infants among African Americans accounts for almost two-thirds of the gap in infant mortality risk between this population group and whites in the United States. The study concludes that, because pre-term delivery is associated with deaths from VLBW, identifying strategies that have the potential to reduce pre-term births is essential to narrowing or eliminating the gap in infant mortality.

Teen Births

Teen births are detrimental to the well being of young mothers, fathers and their babies. According to Human Services Policy (HSP), U.S. Department of Health and Human Services (HHS) some of the characteristics of teen parents or mothers are that teen mothers tend to come from disadvantaged backgrounds, are less likely to complete school, more likely to be a single parent, and more likely to be poor before becoming parents. The economic burden on young women and men is greater when these births occur outside of marriage. According to the Nebraska Vital Statistics Report, in 2002, births to teens (2,418 births) in Nebraska accounted for 9.5 percent of total births (25,381), (*Figure 34*). The number of births (12,187), to girls aged 15 to 19 was up in 1998-2002 compared to the previous five-year period in Nebraska; however, the birth rate was down to 37.1 per 1,000 from 40.2 in 1993-1997. (Birth rate measures the number of births that occur to 1,000 adults of reproductive age in any given year. Birth rates are based on information collected from birth certificates, combined with population estimates generated by the U.S. Bureau of the Census. Rates for males should be interpreted with caution, however, due to potential biases from under-reporting).

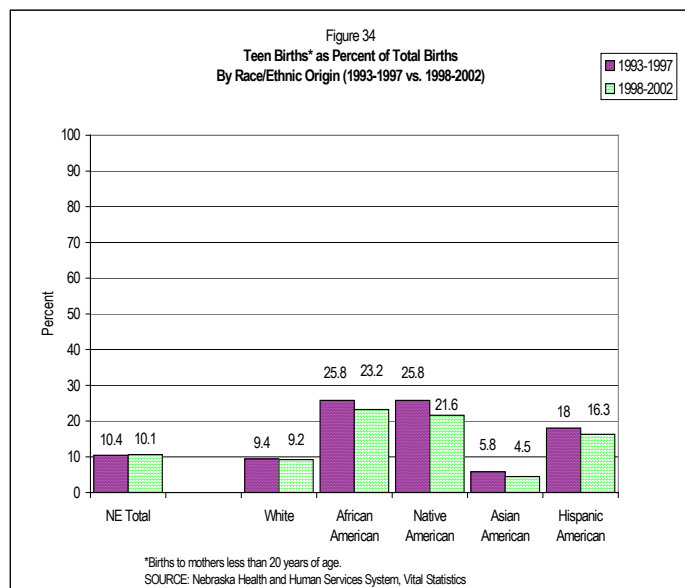
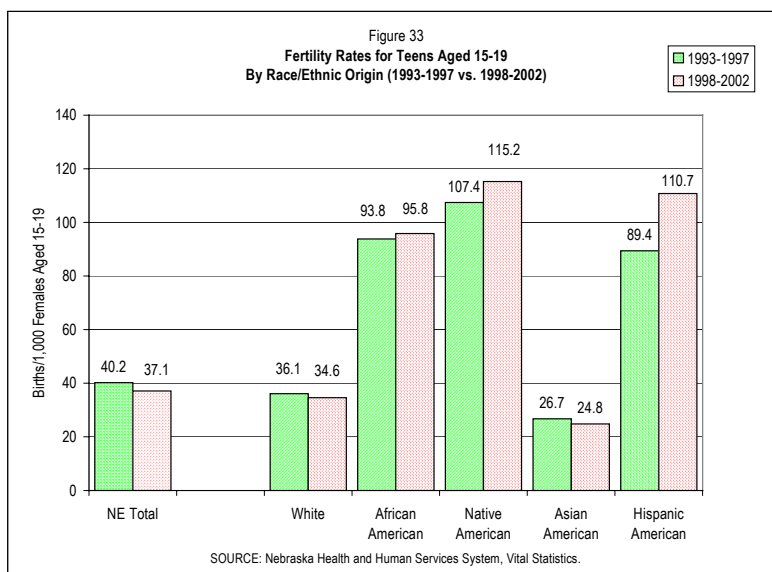
“Fertility rate” is the number of live births per 1,000 female 15-44 years of age. Calculated by number of live births divided by female population ages 15-44 multiplied by 1,000. Fertility rate for teens aged 15-19 increased for all racial/ethnic groups except whites and Asian Americans

(Figure 33). The greatest increases were recorded for Hispanic American (23.8 percent) and Native American (7.3 percent) teens. Overall, fertility rates for Native American (115.2) and Hispanic American (110.7) girls were 3.3 and 3.2 the rate for white teens (34.6). The rate for African Americans (95.8) was a little lower than the Native American and Hispanic American rates, but 2.8 times the white rate. The proportion of all births occurring to teenagers as shown in Figure 34 remained fairly stable over the two five-year periods, with slight decreases for all groups.

Although more than three-fourths of all teen births in Nebraska occurred among white adolescents in 1998-2002, births to teenagers made up a greater percentage of total births for racial/ethnic minority groups.

A recent study reported by the New England Journal of Medicine (NEJM), found that being a young mother may by itself be a risk factor for premature delivery. In previous studies, experts speculated that because teen mothers are often poor, not well educated or are from racial minorities, their living conditions---not their age accounted for their poor pregnancy outcomes. This research

attempted to control for these conditions by studying only white middle-class teenagers. Results showed that young maternal age itself is a significant risk factor for poor outcomes, not just when combined with adverse environmental factors.



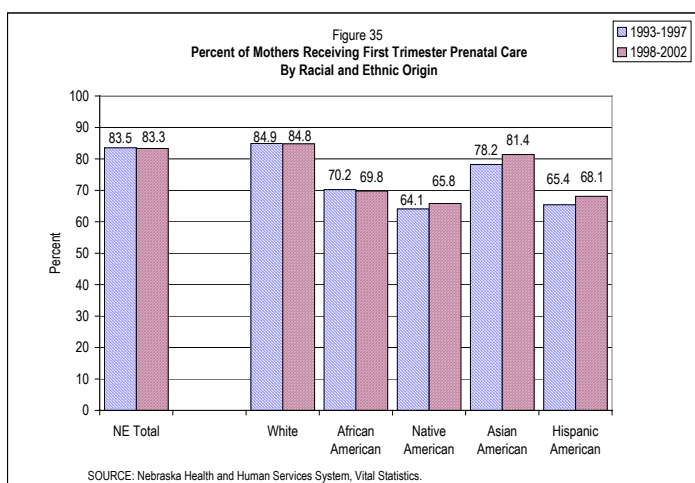
Based on this study, population subgroups that have a high proportion of births to teenage mothers might be expected to also have higher rates of premature/LBW births. “Maternal age also is a risk factor for infant death. Mortality rates are highest among infants born to young,” (Healthy People 2010, Maternal and Child Health, 2002). In Nebraska, teen birth rates for African Americans (232.3/1,000 live births), Native Americans (215.8/1,000 live births) and Hispanic Americans (162.7/1,000 live births) were all higher than the average for the state, but only African Americans experienced a much higher rate of low-weight births.

Lack of Prenatal Care

The Institute of Medicine (IOM), reports that every dollar spent on prenatal care for low-income women saves about three dollars in medical expenses for low birth weight infants during their first year of life. Babies whose mothers received no prenatal care are three times more likely to die during infancy. Prenatal care is especially important when other risk factors such as diabetes or hypertension are present in the mother. For many pregnant women, prenatal care is inaccessible due to cost. The working poor are especially vulnerable because their incomes may be too high to allow eligibility for Medicaid, yet their private insurance may not provide maternity coverage.

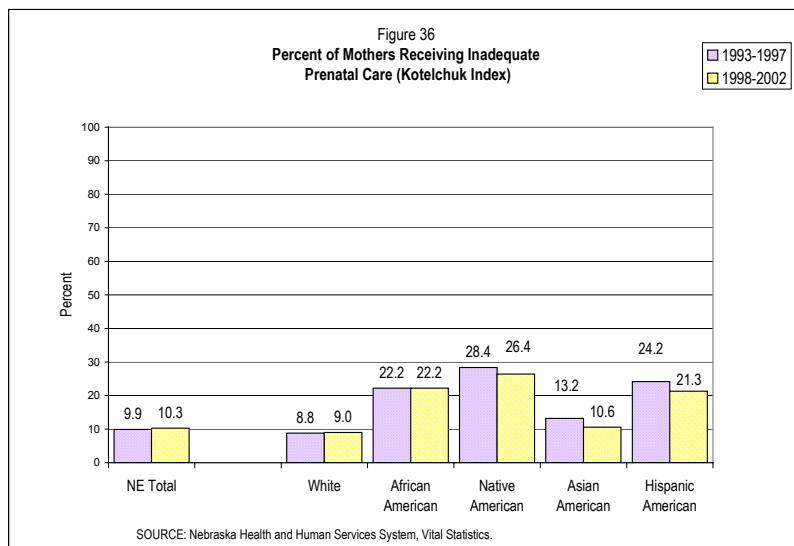
Mothers who initiated prenatal care after the first trimester of pregnancy and those who received no prenatal care at all are considered at risk. Nebraska mothers who are members of racial and ethnic minorities are less likely than white mothers to receive first trimester prenatal care (*Figure 35, Table 17A*). However, except for a decline among African American mothers, improvement was noted for Native Americans, Asian Americans, and Hispanic American mothers in Nebraska, during 1998-2002 (*Figure 35*).

Although the proportion of mothers who received first trimester prenatal care appeared to be stabilized for racial and ethnic groups in Nebraska, Asian Americans, Native Americans and Hispanics seemed to have experienced a slight increase in the proportion receiving first trimester prenatal care in 1998-2002. They were on the average about 0.8 times as likely as white mothers in Nebraska to receive prenatal care that began during the first three months of pregnancy.



Overall, as Figure 35 seems to indicate, there appeared to be no real change in a decade in the percent of mothers who obtained first trimester prenatal care in Nebraska.

In the five-year period, 1998-2002, the Kotelchuk Index (a measure of adequacy or inadequacy of prenatal care by using a combination of: number of prenatal visits; gestation; and when trimester prenatal care was started) was applied. As with first trimester care data discussed above, Kotelchuk Index scores also reveal some variations in the percentage of Nebraska mothers in all racial/ethnic groups who received inadequate prenatal care (*Figure 36*). Using these data, about one in 10 white mothers in 1998-2002 received inadequate care, which was a slight decline from the previous five years.

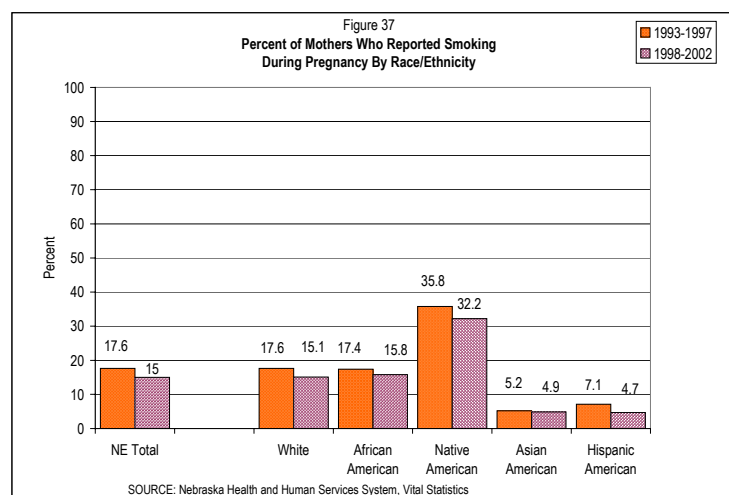


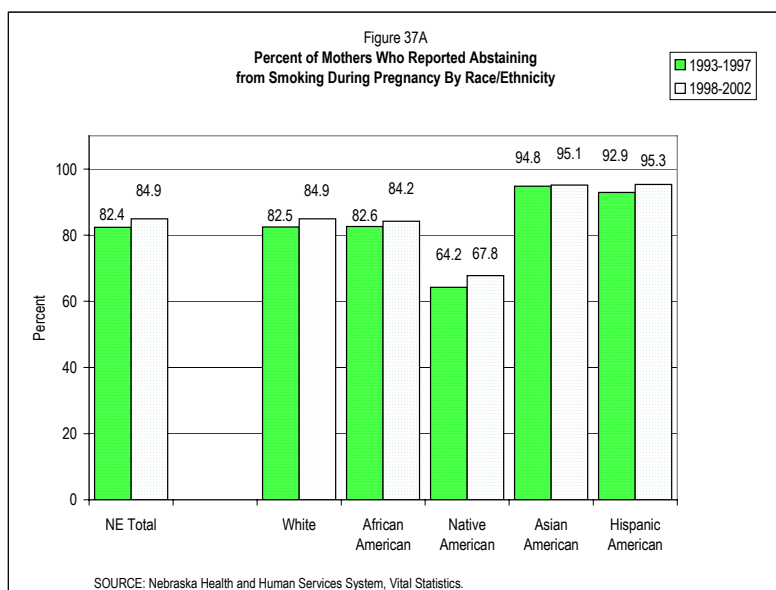
Although the gap between inadequate prenatal care rates for racial/ethnic minority mothers and whites narrowed, the proportion of minority mothers was still much higher. Among Native Americans, 26.4 percent received inadequate prenatal care, as did 22.2 percent of African American mothers and 21.3 percent of Hispanic mothers. The proportion of Asian American mothers who did not receive adequate care was 10.6 percent (*Figure 36*).

Substance Abuse

Poor pregnancy outcomes are often linked to maternal smoking, consumption of alcohol, or use of illicit drugs. Smoking during pregnancy doubles the risk of having a low birth weight infant and is a contributing factor in 20 to 40 percent of all low birth weight infants born in the U.S. In Nebraska, information on tobacco use during pregnancy has been collected on birth certificates since 1990. Native Americans (32.2 percent) were twice as likely as whites (15.1 percent) to smoking during pregnancy (*Figure 37*). The proportion of African American women who smoked during pregnancy (15.8 percent) was about equal to the white rate.

Only 4.7 percent of Hispanic American mothers and 4.9 percent of Asian American mothers in 1998-2002 reported smoking during pregnancy. Reported prevalence of smoking during pregnancy decreased from 1993-1997 to 1998-2002 for all racial/ethnic groups. The Nebraska 2010 Health Goals and Objectives target to reduce to only 2.0 percent, the number of pregnant mother who smoke during pregnancy. All racial and ethnic groups fell short of meeting the 2010 health goals and objectives of increasing to 98 percent, the proportion of mothers abstaining from smoking during pregnancy (*Figure 37A*); although Hispanic and Asian American mothers came close to achieving this objective.





Heavy alcohol consumption during pregnancy is associated with fetal alcohol syndrome (FAS), which is characterized by growth retardation, facial malformations and central nervous system dysfunctions including mental retardation. This birth defect is preventable. National data show that one of every 29 women who know they are pregnant report drinking 7 or more drinks per week, or 5 or more drinks on any one occasion.

One in eight women of childbearing age reports drinking that could harm her baby even before she knows she is pregnant.

The 1998-2002 data indicates that 1.1 percent of women in the state reported drinking during pregnancy. Among racial and ethnic groups, 3.6 percent of Native American, 1.5 percent African American, and 0.7 percent of Hispanic women reported drinking during pregnancy, compared to 1 percent for white pregnant women. These percentages should be viewed with caution, since alcohol use, particularly during pregnancy, is likely to be under-reported. In addition, Nebraska data show prevalence comparable to national estimates.

PROGRESS TOWARD OBJECTIVES

Based on five-year averages, the 1998-2002 infant mortality rates for Native Americans in Nebraska (*Table 18*) increased by nearly 53 percent compared to the baseline. The 1998-2002 rate of 13.6 did not achieve the Nebraska Year 2010 objective of no more than 4.5 infant deaths per 1,000 live births. It is also higher than the current national infant mortality rate for Native Americans (9.3) and the national Year 2010 objective of 4.5 for this group. The 1998-2002 neonatal death rate for Native Americans indicates an upward trend when compared to the baseline rate. To achieve the Nebraska Year 2010 objective would require an approximate 58.6 percent reduction in neonatal deaths among this group.

Examining post-neonatal death rates for Native Americans indicates a slight increase from the baseline. To meet the Nebraska objective of no more than 1.2 deaths per 1,000 live births, an additional reduction in the current post-neonatal mortality rate (6.5) of nearly 82 percent would be required. For African Americans in the state, the 1998-2002 infant mortality rate slightly increased by 4.7 percent from the baseline. A further reduction of nearly 75 percent would be needed to meet the Nebraska Year 2010 objective of no more than 4.5 infant deaths per 1,000 live births. Although

Hispanics experienced a 21.7 percent decrease in infant mortality rate, this group need to make further reduction in order to achieve the Nebraska Year 2010 Health Goals and Objectives of no more than 4.5 infant death rate per 1,000 live births. Asian Americans are within range of meeting the set goals.

The 1998-2002 neonatal death rate for African Americans indicates an upward trend when compared to the baseline rate. To achieve the Nebraska Year 2010 health goals and objective of no more than 2.9 deaths per 1,000 live births, an approximate 76.0 percent reduction in neonatal deaths among this group is required. The post-neonatal mortality rate for African Americans (6.0 deaths per 1,000 live births) showed a slight decrease but failed to meet the Nebraska Year 2010 objective of no more than 1.2 deaths per 1,000 live births. To meet it, the current rate would need to continue to decrease by about 80 percent.

Although Hispanics continued to experience decrease in the rate of neonatal (-20.3 percent) and post-neonatal (-25.0 percent) death rates, yet reductions are needed to meet the health goals and objectives. Asian Americans met the Nebraska Year 2010 health goals and objectives for post-neonatal deaths, however, this group needs about 23.6 percent reduction in the neonatal death rate to meet the health goals and objectives.

Little progress has been made in reducing the rate of low birth weight babies among African Americans in Nebraska, with the low birth weight rate increasing by 8.3 percent from the 1993-1997 baseline. A reduction of 61.3 percent in the current rate of 129.1 per 1,000 live births would be necessary to achieve the Nebraska Year 2010 objective of no more than the rate 50.0 per 1,000 live births (*Table 18*). When compared to the national current rate of 130 LBW per 1,000 live births, the Nebraska rate appears comparable.

Table 18
Maternal and Child Health
Baseline, Current Data and Year 2010 Objectives
For U.S. and Nebraska Racial and Ethnic Minority Populations

Indicator and Target Groups	Nebraska Baseline (1993-1997)	Nebraska Current Rate (1998-2002)	NE % Change Current vs. Baseline	NE Year 2010 Objective	U.S. Data Year 1999	U.S. Current Rate	U.S. Year 2010 Objective
Infant deaths/1,000 live births							
African American	17.1	17.9	4.7	4.5	1999	14.0	4.5
Native American	8.9	13.6	52.8	4.5	1999	9.3	4.5
Asian American	5.2	5.0	-3.8	4.5	1999	4.8	4.5
Hispanic	9.2	7.2	-21.7	4.5	1999	5.7	4.5
Neonatal deaths/1,000 live births							
African American	10.9	11.9	9.2	2.9	1999	9.5	2.9
Native American	2.8	7.0	150.0	2.9	1999	5.0	2.9
Asian American	3.6	3.8	5.6	2.9	1999	3.2	2.9
Hispanic	6.4	5.1	-20.3	2.9	1999	3.9	2.9
Post-neonatal deaths/1,000 live births							
African American	6.1	6.0	-1.6	1.2	1999	4.5	1.2
Native American	6.2	6.5	4.8	1.2	1999	4.3	1.2
Asian American	1.5	1.1	-26.7	1.2	1999	1.7	1.2
Hispanic	2.8	2.1	-25.0	1.2	1999	1.8	1.2
Low birth weight infants/1,000 live births**							
African American	119.2	129.1	8.3	50	1998	130	5.0
Native American	64.0	68.0	6.3	50	1998	6.8	5.0
Asian American	69.7	81.3	16.6	50	1998	7.4	5.0
Hispanic	60.2	64.5	7.1	50	1998	6.4	5.0
Percent of mother receiving first trimester prenatal care							
African American	70.2	69.8	-0.6	90	1998	73	90
Native American	64.1	65.8	2.7	90	1998	69	90
Asian American	78.2	81.4	4.1	90	1998	-	90
Hispanic	65.4	68.1	4.1	90	1998	-	90
Percent of mothers who abstained from smoking during pregnancy							
African American	82.6	84.2	1.9	98.0	1998	91	99
Native American	64.2	67.8	5.6	98.0	1998	80	99
Asian American	94.8	95.1	0.3	98.0	1998	97	99
Hispanic	92.9	95.3	2.6	98.0	1998	96	99

*Rates, Age-adjusted to 2000

** While the U.S. and Nebraska 2010 Health Goals and Objective Low Birth weight rates were calculated based on 100 live births, the rates for this report were based on 1,000 live births. Hence the U.S. and NE Year 2010 Objectives for each racial and ethnic group were multiplied by 10 to arrive at the above Year 2010 Objectives for Low Birth weights.

SOURCE: Nebraska Health and Human Services System, Vital Statistics 1993-1997 and 1998-2002, and Nebraska 2010 Health Goals and Objectives.

Compared to Nebraska baseline rates, the 1998-2002 first trimester prenatal care rates for Native Americans (65.8 percent) slightly increased, but decreased for African Americans (69.8 percent). For Hispanic Americans, the current rate (68.1 percent) is only 4.1 percent, a rate slightly higher than the baseline. Asian Americans experienced a slight increase of 4.1 percent in the first trimester prenatal care. Despite the improvements for Native Americans, Asian and Hispanic Americans, rates for all three minority groups are still well below the Nebraska Year 2010 objective of at least 90 percent receiving first trimester prenatal care.

Another area targeted for intervention is to increase the proportion of mothers who abstained from smoking during pregnancy. In Nebraska, Hispanic Americans (95.3 percent), and Asian Americans (95.1 percent) recorded the highest proportion of mothers who reported abstaining from cigarette smoking during pregnancy. African American women and Native American women recorded 84.2 and 67.8 percent in abstaining from smoking during pregnancy. While Hispanic and Asian American women failed to meet the 98 percent target a reduction of 16.4 and 44.5 percent for both African Americans and Native Americans is required to meet the year 2010 health goals and objectives.

UNINTENTIONAL INJURIES

Unintentional or accidental injuries were the fifth leading cause of death in the U.S. in 2001, and fifth in Nebraska in 1998-2002. In 2001, there were a total of 2,417,798 deaths in the U.S. Of the total, about 4.0 percent or 97,707 deaths were due to unintentional injuries, up 7.3 percent from 1998.

As in previous years, accidents were the leading cause of death for those under 34 years in 2001. Since injury victims are generally younger than persons dying from other leading causes of death (such as heart disease or cancer), the number of potential YPLL due to injuries is very high. In 2000 there were approximately 3 million years of potential life lost before age 75 due to unintentional injuries, almost equaling both heart disease and cancer. In addition, millions of people are incapacitated by nonfatal injuries and suffer lifelong disabilities. Motor vehicle fatalities account for more than half of all unintentional injury deaths in the U.S. and contributed more than 2.3 million years of potential lost before age 75 years.

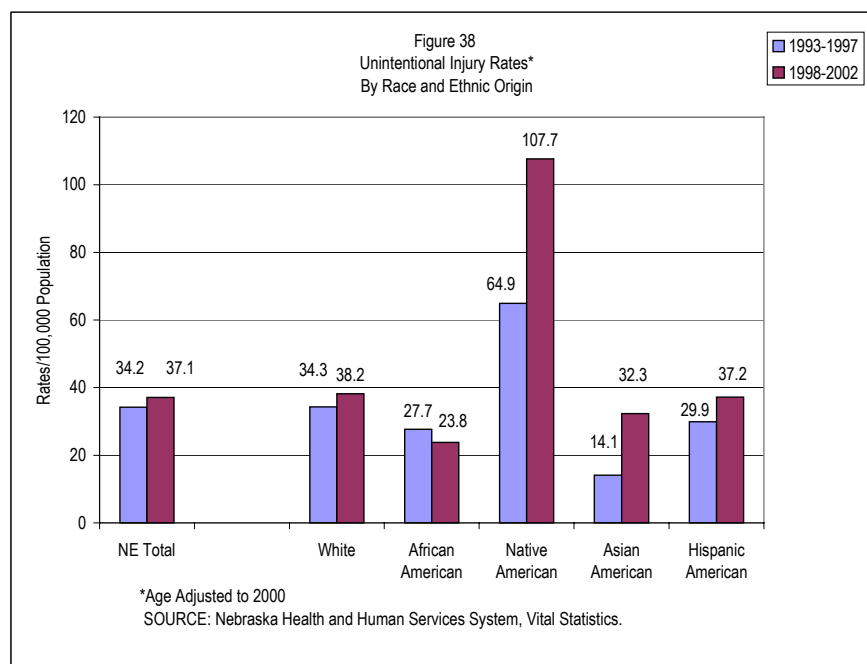
According to the Nebraska Health and Human Services System, in Nebraska, deaths and death rates due to unintentional injuries are on the increase since 1996. In 2002, there were a total of 754 accidental deaths in Nebraska. During 1998-2002, a total of 3,340 deaths resulted from unintentional injuries at an age-adjusted rate of 37.1 deaths per 100,000 population. Of the total, motor vehicles were responsible for the deaths of 1,514 Nebraskans (45.3 percent), at an adjusted rate of 17.4 per 100,000 population. Falls caused the deaths of 721 Nebraskans at the rate of 7.4 deaths per 100,000 population. Firearm (31), Fire/Burns (80) and Poison (171) were also other causes of unintentional injury deaths among Nebraskans, during 1998-2002.

DEATHS DUE TO UNINTENTIONAL INJURIES:

Nationally, the 2000 death rate due to unintentional injuries for Native Americans (59.6 per 100,000) is 1.7 times the rate for the white (35.5) population. African Americans (38.4) also experienced a slightly higher rate of death due to unintentional injuries, with 1.1 times the risk of death from unintentional injuries recorded for white Americans. Hispanic Americans (30.6) were only slightly less while Asian Americans (18.4) were about half as likely as whites to die from these injuries.

In Nebraska, although the number of unintentional injury deaths increased by 14.1 percent from 2,926 in 1993-1997 to 3,340 during 1998-2002, the death rate increased by approximately 8.4 percent from the rate of 34.2 per 100,000 during 1993-1997. The death rate was 37.1 per 100,000 during 1998-2002. The trend shows similar increases in the number of deaths and death rates among the racial and ethnic groups (*Table 19*).

The unintentional injury death rate for Native Americans in Nebraska for 1998-2002 increased by 66 percent as compared to the previous five-year period, 1993-1997 (*Table 19, Figure 38*). The death rate (107.7) is 2.8 times as high as the rate for whites (38.2). The Asian American mortality rate due to unintentional injuries experienced the highest increase of 129 percent from the rate of 14.1 deaths in 1993-1997 to 32.3 deaths per 100,000 population during 1998-2002. The number of deaths jumped from 7 during 1993-1997 to 21 deaths -- a 200 percent increase during 1998-2002.



Hispanic Nebraskans also experienced a slight increase in mortality due to unintentional injuries in the last five-year period, 1998-2002. The latest rate (37.2) is 0.9 times the comparable rate for whites in the state. African Americans (23.8) in Nebraska showed a lower rate for unintentional injuries than whites (38.2). The African American rate also decreased slightly from the last five-year period (27.7).

Table 19
Unintentional Injuries
Mortality Rates and Relative Risk of Mortality
For Nebraska Racial and Ethnic Minority Populations

	1993-1997 Age-Adjusted* Mortality Rate per 100,000 Population	Relative Risk*			1998-2002 Age-Adjusted* Mortality Rate per 100,000 Population	Relative Risk*		
		Total	Males	Females		Total	Males	Females
Unintentional Injuries								
Nebraska Total	34.2				37.1			
White	34.3	1.0	1.0	1.0	38.2	1.0	1.0	1.0
African American	27.7	0.8	0.9	0.7	23.8	0.6	0.7	0.6
Native American	64.9	1.9	1.9	1.9	107.7	2.8	2.8	3.0
Asian American	14.1	0.4	0.1	0.9	32.3	0.8	1.1	0.4
Hispanic American	29.9	0.9	0.9	0.5	37.2	0.9	0.9	0.7
Motor Vehicle Fatalities								
Nebraska Total	16.8				17.4			
White	17.0	1.0	1.0	1.0	18.2		1.0	1.0
African American	10.7	0.6	0.7	0.6	10.8	0.6	0.7	0.4
Native American	29.7	1.7	1.4	2.3	43.6	2.4	2.0	3.2
Asian American	6.0	0.4	0.0	0.8	16.4	0.9	0.9	0.9
Hispanic American	19.0	1.1	1.2	0.8	19.1	1.0	1.2	0.6
*Minority Age-Adjusted Mortality Rate/100,000 divided by White Age-Adjusted Mortality Rate/100,000 SOURCE: Nebraska Health and Human Services System, Nebraska Vital Statistics data, 1993-1997 and 1998-2002.								

YEARS OF POTENTIAL LIFE LOST (YPLL) TO UNINTENTIONAL INJURIES

Overall, an average of 2,333.8 years of potential life were lost each year in the five-year period 1998-2002 due to unintentional injuries among Nebraska's racial and ethnic minority populations (*Table 20*). Native Americans had approximately three times as many and Hispanic Americans had 1.1 times as many YPLL per person as whites.

Table 20
Years of Potential Life Lost – Unintentional Injuries
Based on 75 Productive Years of Life
For Nebraska Racial and Ethnic Minority Populations

Category	1993-1997			1998-2002		
	# of Total YPLL	Age-Adjusted Rate/100,000 Population	Minority-to-White Ratio*	# of Total YPLL	Age-Adjusted Rate/100,000 Population	Minority-to-White Ratio*
Unintentional Injuries						
Nebraska Total	76,299	929.8		81,029	941.8	
White	70,960	927.3	1.0	74,873	988.0	1.0
African American	2,896	800.9	0.8	2,678	718.9	0.7
Native American	2,085	2,603.9	2.8	2,290	2,856.8	2.9
Asian American	223	241.7	0.3	656	576.3	0.6
Hispanic American	4,874	1,293.2	1.4	6,045	1,086.3	1.1
Average/Year (Minorities)	2,015.6			2,333.8		
Motor Vehicle Fatalities						
Nebraska Total	49,654	602.3		53,164	612.6	
White	46,767	609.2	1.0	49,661	651.4	1.0
African American	1,437	385.2	0.6	1,488	396.4	0.6
Native American	1,117	1,316.7	2.2	1,223	1,456.8	2.2
Asian American	198	198.2	0.3	459	402.0	0.6
Hispanic American	3,290	873.3	1.4	4,034	709.8	1.1
Average/Year (Minorities)	1,208.4			1,440.8		
*Minority Age-Adjusted Mortality Rate/100,000 divided by White Age-Adjusted Mortality Rate/100,000 SOURCE: Nebraska Health and Human Services System, Nebraska Vital Statistics data, 1993-1997 and 1998-2002.						

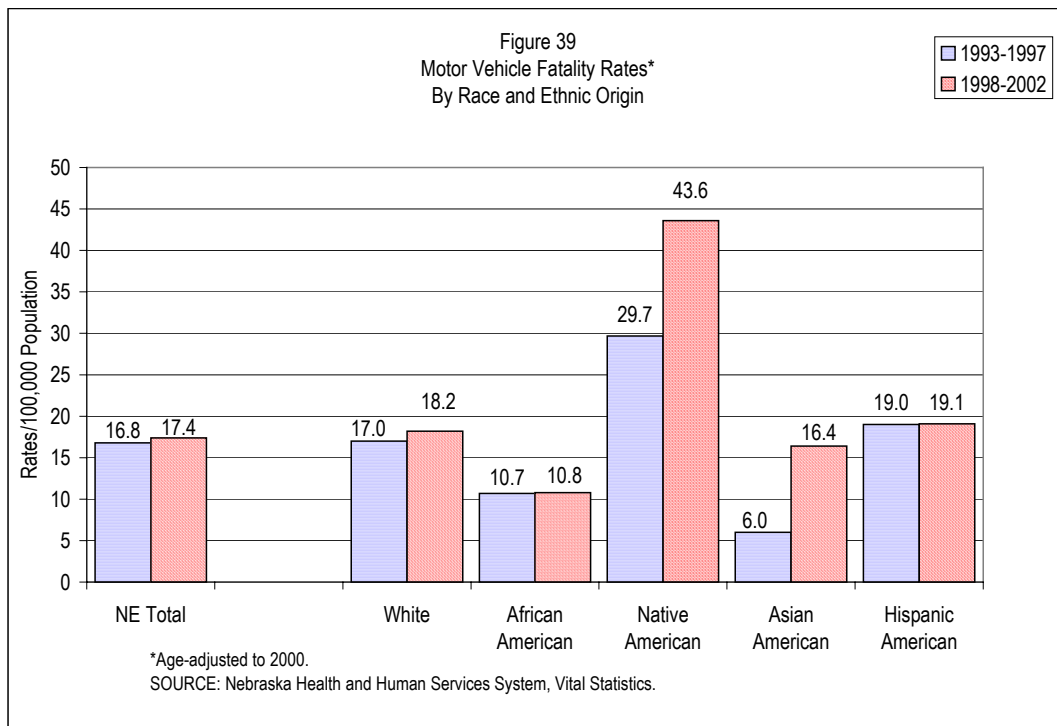
MOTOR VEHICLE FATALITY RATES

Compared to the previous five-year period 1993-1997, current rates for each racial/ethnic group including whites, showed increases in motor vehicle fatality rates (*Figure 39, Table 19*).

Native Americans (43.6 deaths per 100,000 population) experienced an increase in rate of 46.8 percent; this rate was 2.4 times more likely to die from motor vehicle accidents than white residents. During 1998-2002 Native American females were 3.2 times more likely to die from motor vehicle accident than were white residents. Although Asian Americans experienced a large increase from 6.0 in 1993-1997 to 16.4 (173.3 percent increase) in 1998-2002, that rate was slightly below the Nebraska rate (17.4).

YEARS OF POTENTIAL LIFE LOST (YPLL) TO MOTOR VEHICLE CRASHES

During 1998-2002, an estimated 1,440.8 years of potential life were lost due to motor vehicle fatalities among racial and ethnic minority residents of Nebraska each year. There were more than two times as many years of life lost per person for Native Americans and 1.1 times for Hispanic Americans as for white Nebraskans (*Table 20*).



RISK FACTORS

Substance Abuse

Alcohol use is closely related to the causes and severity of many unintentional injuries. According to the National Center for Injury Prevention and Control (NCIPC) and Control, “impaired driving will affect one in three Americans during their lifetimes. Alcohol-related motor vehicle crashes kill someone every 30 minutes and nonfatally injure someone every two minutes. During 2001, 17,448 people in the U.S. died in alcohol-related motor vehicle crashes, representing 41 percent of all traffic-related deaths for the year, according to CDC. Drugs other than alcohol (e.g., marijuana and cocaine) have been identified as factors in 18 percent of deaths among motor vehicle drivers,” (CDC and NCIPC 1998, p1.)

In addition, further studies by CDC’s National Center for Injury Prevention and Control (NCIPC), state that alcohol is involved in many injuries, including approximately 40% of deaths associated with residential fires and between 25-50 percent of deaths from drowning. Studies have

shown that alcohol is linked to between 17-53 percent of all falls. Between 48 and 67 percent of people dying in fires were found to have blood alcohol levels indicating intoxication, (ibid., p. 1).

Based on the recent 2002 Nebraska Crash Outcome Data Evaluation System (CODES) study, 41 percent of all motor vehicle accidents resulting in deaths in the nation, involved alcohol. In Nebraska between 1996 and 2001, of the 1,727 traffic deaths, more than 35 percent involved alcohol. During 1996-1999, 2,177 Nebraska drivers who were drinking and driving were involved in motor vehicle crashes. Of the total, 64 percent were males and 36 percent were females. Furthermore, 88 percent of the total involved drivers 45 years and under (Nebraska Crash Outcome Data Evaluation System, 2002).

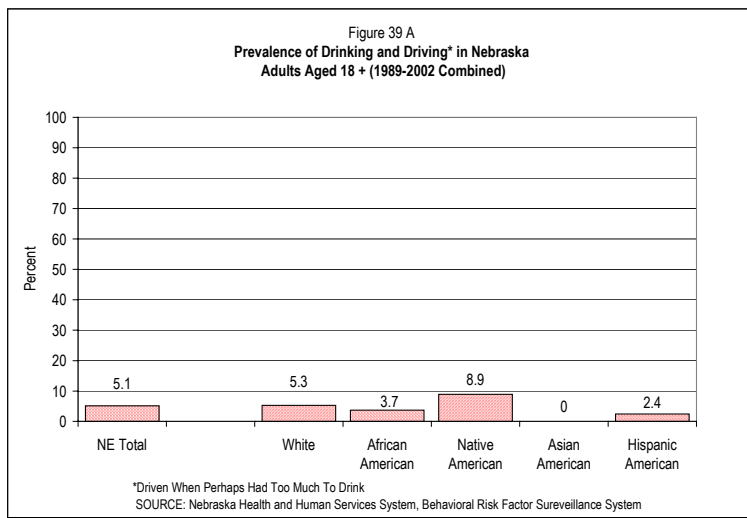
The Nebraska Highway Safety section of the Department of Roads estimates that 41.2 percent of all fatal motor vehicle crashes in Nebraska in 1999 involved alcohol. Teenagers and young adults account for a disproportionate share of alcohol-related traffic fatalities. Results of the 1999 Nebraska Youth Risk Behavior Survey found that 26 percent of youths in grades 9-12 responded that they had driven after drinking alcohol during the past 12 months while 46 percent had ridden in a car with a driver who had been drinking.

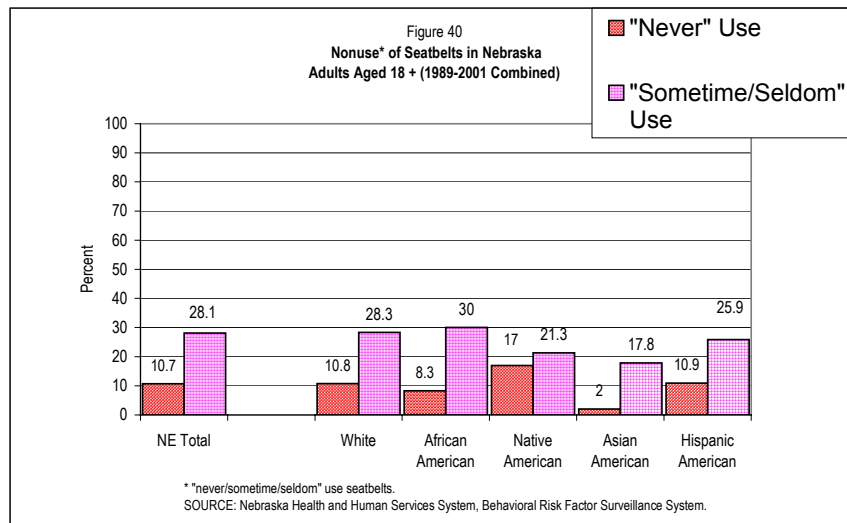
The results of the 1989-2002 Nebraska BRFSS demonstrates that, overall, approximately 5.1 percent of adult Nebraskans reported drinking and driving. For white Nebraskans, 5.3 percent, African Americans, 3.7 percent, Native Americans, 8.9 percent, and Hispanics, 2.4 percent reported drinking and driving (*Figure 39A*).

Noneuse of Seatbelts

The effectiveness of seatbelts in preventing injury and death in motor vehicle crashes is well documented. When used properly, it is estimated that safety belts can reduce motor vehicle fatalities by 40 to 50 percent. Results of the combined Nebraska BRFSS for 1989-2001 indicates that 61.2 percent of adults “always” or “nearly always” use safety belts when driving or riding in a motor vehicle. Furthermore 28.1 percent of adults self-reported that they “sometimes” or “seldom” use safety belts. At risk due to nonuse of these safety restraints, are 10.7 percent who “never” use them.

Results of the combined Nebraska BRFSS for 1989-2001, show that 10.8 percent of whites, 8.3 percent of African Americans, nearly 17 percent of Native Americans and 10.9 percent of Hispanic Americans aged 18 years and older reported they “never” use seatbelts. Native Americans were more likely than whites or African Americans in the state to be at risk for nonuse of seatbelts (17 percent). About two percent of Asian Americans 18 years and older reported they “never” use seatbelts (*Figure 40*).





PROGRESS TOWARD OBJECTIVES

The mortality rate due to unintentional injuries for Asian American was 32.3 in 1998-2002 (*Table 21*). This rate showed a substantial increase of 129 percent from the 1993--1997 baseline rate of 14.1 deaths per 100,000 population. Thus, to achieve the Nebraska objective for year 2010 of no more than 7.4 deaths per 100,000 population, a reduction of close to 77 percent in the unintentional mortality rate for this group will be required.

Native Americans are 2.8 times more likely than whites to die from unintentional injuries. Among this group, the mortality rate for this cause increased approximately 66 percent to 107.7 deaths per 100,000 in 1998-2002, compared to 64.9 in 1993-1997. To meet the Nebraska Year 2010 objective for this group of no more than 19.4 deaths due to unintentional injuries among Native Americans, a considerable reduction of about 82 percent in the current rate would have to be achieved by this group.

Table 21
Unintentional Injuries*
 Baseline, Current Data and Year 2010 Objectives
 For U.S. and Nebraska Racial and Ethnic Minority Populations

Indicator and Target Groups	Nebraska Baseline (1993-1997)	Nebraska Current Rate (1998-2002)	NE % Change Current vs. Baseline	NE Year 2010 Objective	U.S. Current Rate (1998)	U.S. Year 2010 Objective
Deaths Due to Unintentional Injuries/100,000 Population						
U.S.	34.2	37.1	8.5	19.4	35.0	17.5
Nebraska					38.8	17.5
White	34.3	38.2	11.4	19.4	34.8	17.5
African American	27.7	23.8	-14.0	19.4	39.5	17.5
Native American	64.9	107.7	66.0	19.4	59.9	17.5
Asian American	14.1	32.3	129.0	7.4	17.6	17.5
Hispanic American	29.9	37.2	24.4	19.4	30.2	17.5
Deaths Due to Motor Vehicle Crashes/100,000 Population						
U.S.					15.7	9.2
Nebraska	16.8	17.4	3.4	12.0	15.6	9.2
White	17.0	18.2	7.1	12.0	15.6	9.2
African American	10.7	10.8	0.9	12.0	16.8	9.2
Native Americans	29.7	43.6	46.8	12.0	30.4	9.2
Asian American	6.0	16.4	173.3	4.0	9.3	9.2
Hispanic American	19.0	19.1	0.5	12.0	14.7	9.2
*Rates, Age-adjusted to 2000 SOURCE: Nebraska Health and Human Services System, Vital Statistics 1993-1997 and 1998-2002, and Nebraska 2010 Health Goals and Objectives.						

The unintentional injury death rate for Hispanics also slightly increased by a much smaller percentage, resulting in a 1998-2002 rate of 37.2. This rate would need to decline by 48 percent to reach the Nebraska year 2010 objective. Native Americans in Nebraska experienced a substantial increase of 46.8 percent in mortality rates due to motor vehicle fatality for the period 1998-2002 from the 1993-1997 baseline of 29.7 deaths per 100,000 population. The current rate of 43.6 did not achieve the Nebraska objective of no more than 12.0 deaths per 100,000 due to motor vehicle crashes for Native Americans. In order to achieve the 2010 objective, a reduction of the motor vehicle fatality rate of 72.5 percent would have to be made.

Motor vehicle fatality rates for Asians also increased significantly from the 1993-1997 baseline of 6.0 deaths per 100,000 population. The current rate of 16.4 does not meet the 2010 objective of no more than 4.0 deaths per 100,000 due to motor vehicle crashes among Asians. A further reduction of about 76 percent in the current rate would achieve the targeted 2010 objective for this group.

VIOLENT AND ABUSIVE BEHAVIOR

OVERVIEW OF HEALTH IMPACT

Violent and abusive behaviors include suicide, homicide, weapon-related deaths and injuries, child abuse, rape, assaults and domestic violence. The control of these behaviors has generally been the responsibility of law enforcement and social service agencies. However, with the number of victims rising and now exceeding 2 million Americans each year, violence has become a public health as well as a social problem.

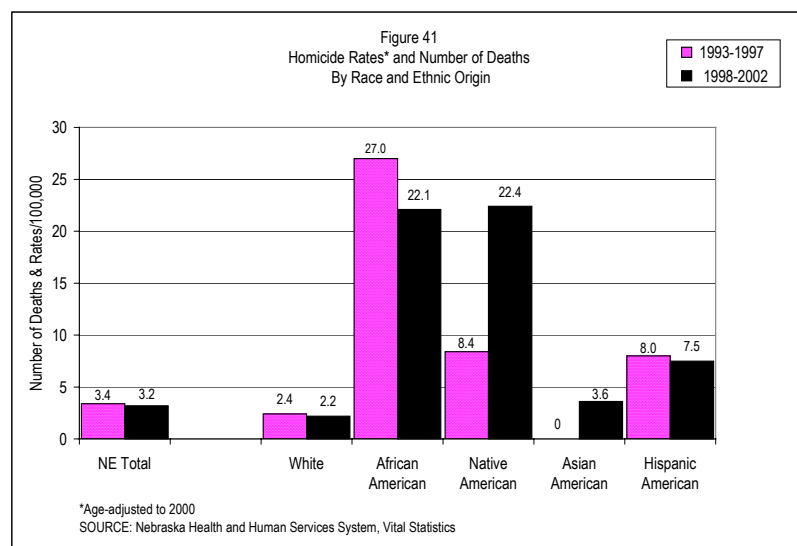
According to the Nebraska Commission on Law Enforcement and Criminal Justice (NCLEC) violent crimes are defined in Nebraska as murders, rape, felony assaults, and robberies. In 2001, crimes in Nebraska increased by 5.2 percent to 73,573 from the 69,961 reported to law enforcement agencies in 2000. Crimes in Omaha, Lincoln, and Hall County increased by 10.6, and one percent respectively with Hall County recording an additional 45 more crimes in 2001 over 2000. Murder-Manslaughter in Nebraska decreased by about 33.3 percent. "There were 40 murders in 2001, compared with 60 in 2000. Rape was down 4 percent, robbery was down 1 percent and aggravated assault was down 10 percent," *The Grand Island Independent* quoted the Nebraska Commission on Law Enforcement (2002, p.1).

HOMICIDE RATES

Nationwide, homicide resulted in the deaths of 16,765 Americans in 2000, at the rate of 6.1 deaths per 100,000 population. Homicide had ranked second among 15-24 year olds and 4th among 10-14 year olds among leading causes of death. The homicide rate has been on the decrease since 1990 when the rate was 10.2. During 1998-2002 homicides did not appear among the top 15 causes of death for the overall population of Nebraska. In Nebraska during 1998-2002, there were 274 homicide deaths at the rate of 3.2 per 100,000 compared to 282 deaths in 1993-1997 at the rate of 3.4 per 100,000 population (*Figure 41*).

In 1998 the Nebraska homicide rate (3.5) was less than half the national rate (7.3). As reported nationally, males and young adults were more likely than other persons to become homicide victims.

Homicides were the fifth leading cause of each for African Americans in Nebraska



in 1998-2002. During 1998-2002, African Americans in Nebraska were 10.0 times more likely than whites to die from homicide. This cause accounted for 84 deaths over the last five years and resulted in a rate of 22.1 deaths per 100,000 population for this group. The current homicide rate is down slightly from the 1993-1997 rate of 27.0 to 22.1 deaths per 100,000 population, thus resulting in an 11.1 percent decrease in homicides relative risk (*Table 22*).

Table 22
Violent and Abusive Behavior
Mortality Rates and Relative Risk of Mortality
For Nebraska Racial /Ethnic Populations

	1993-1997 Age-Adjusted* Mortality Rate per 100,000 Population	Relative Risk Minority-to-White Ratio*			1998-2002 Age-Adjusted* Mortality Rate per 100,000 Population	Relative Risk Minority-to-White Ratio*		
		Total	Males	Females		Total	Males	Females
Homicide NE Total	3.4				3.2			
White	2.4	1.0	1.0	1.00	2.2	1.00	1.00	1.00
African American	27.0	11.3	14.5	5.3	22.1	10.0	12.9	5.2
Native American	8.4	3.5	3.5	3.5	22.4	10.2	13.2	7.2
Asian American	0	0.0	0.0	0.0	3.6	1.6	2.1	1.2
Hispanic American	8.0	3.3	3.3	2.9	7.5	3.4	3.7	2.5
Suicide NE Total	11.1				11.3			
White	11.2	1.0	1.0	1.0	11.9	1.0	1.0	1.0
African American	7.8	0.7	0.7	0.5	7.7	0.6	0.5	1.2
Native American	14.0	1.3	1.2	1.2	8.6	0.7	0.7	0.8
Asian American	3.5	0.3	0.4	0.0	4.1	0.3	0.6	0.0
Hispanic American	5.8	0.5	0.5	0.5	5.3	0.4	0.4	0.4
*Age-adjusted to 2000 SOURCE: Nebraska Health and Human Services System, Vital Statistics Data, 1993-1997 and 1998-2002.								

The disparity between rates is even greater for Native Americans where 14 deaths due to homicide were recorded during 1998-2002 making this the tenth leading cause of death for that group. Native Americans in the state were 10.2 times as likely as white Nebraskans to die as a result of homicide. In addition, the homicide rate per 100,000 population for this group has increased by 166.7 percent from 8.4 in 1993-1997 to 22.4 in 1998-2002. The relative risk of death (10.2) from homicides for Native Americans in Nebraska has also shown significant increase (191.4 percent) in the past ten years when compared to 3.5 in the previous five-year period, 1993-1997.

Among Hispanic Nebraskans, in the five-year period, 1998-2002, there were 39 homicides, making it the ninth leading cause of death. The homicide rate per 100,000 population decreased slightly from 8.0 in 1993-1997 to 7.5 during 1998-2002. Hispanic Nebraskans are approximately 3.4 times as likely as white Nebraskans to die from homicide.

YEARS OF POTENTIAL LIFE LOST (YPLL) DUE TO HOMICIDE

Since homicide victims are frequently young, the number of years of potential life lost due to this cause is significant. Among racial and ethnic minority residents of Nebraska, there was an average of 1,358.4 YPLL each year during 1998-2002. The number of YPLL per person was close to 11 times higher for African Americans than for whites in Nebraska. Native Americans averaged 7.5 times as many YPLL per person, while Hispanic Nebraskans averaged 3.2 times and Asians, 1.4 times as many years of potential life lost per person compared to the white population (*Table 23*).

Table 23
Years of Potential Life Lost – Homicides and Suicides
Based on 75 productive Years of Life
For Nebraska Racial and Ethnic Minority Populations.

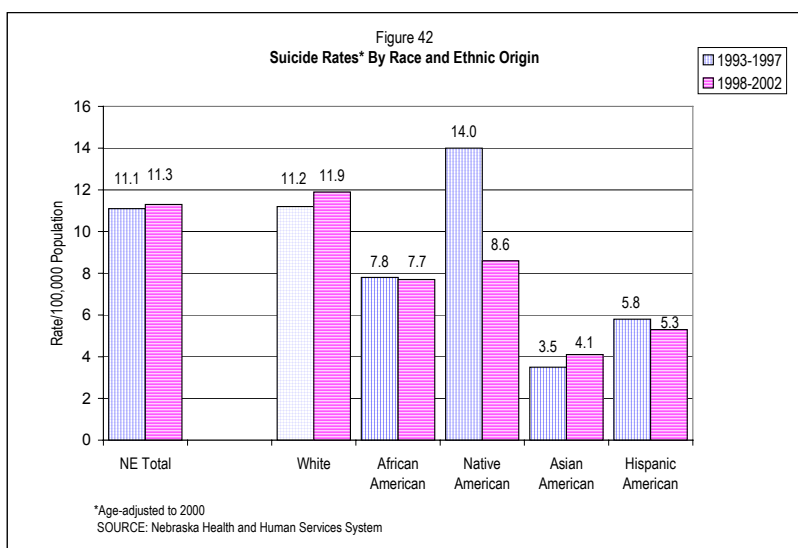
Category	1993-1997			1998-2002		
	# of Total YPLL	Age-Adjusted Rate/100,000 Population	Minority-to-White Ratio*	# of Total YPLL	Age-Adjusted Rate/100,000 Population	Minority-to-White Ratio*
Homicides						
Nebraska Total	13,312	161.5		12,135	140.6	
White	8,426	110.9	1.00	7,126	95.0	1.00
African American	4,538	1,222.1	11.0	4,153	1,029.4	10.8
Native American	349	406.1	3.7	588	715.0	7.5
Asian American	0	0.0	0.0	198	130.8	1.4
Hispanic American	1,405	356.6	3.2	1,853	306.6	3.2
Average/Year (Minorities)	1,258.4			1,358.4		
Suicides						
Nebraska Total	28,795	354.4		30,589	360.6	
White	26,959	354.6	1.0	28,798	381.8	1.0
African American	1,048	298.9	0.8	1,159	314.2	0.8
Native American	606	691.5	1.9	233	323.3	0.8
Asian American	182	153.2	0.4	263	157.8	0.4
Hispanic American	774	241.1	0.7	1,163	215.1	0.6
Average/Year (Minorities)	522			563.6		
*Minority Age-Adjusted Mortality Rate/100,000 divided by White Age-Adjusted Mortality Rate/100,000 SOURCE: Nebraska Health and Human Services System, Nebraska Vital Statistics data, 1993-1997 and 1998-2002.						

SUICIDE RATES

Nationwide, suicide (intentional self-harm) was the eleventh leading cause of death for the total population, accounting for 29,350 deaths in 2000. This is a rate of 10.7 deaths per 100,000 population. Suicide was the third leading cause of death among youth ages 15-19 and 20-24. More people die from suicide than from homicide; the rate is as high as 1.7 times the rate for homicides. American males are four times more likely to die from suicide than females. Nevertheless, females are more likely to attempt suicide than men.

In Nebraska, suicide rates have remained fairly stable. However, during 1998-2002 while there was a slight increase in suicide rate overall and for whites and Asian Americans, racial and ethnic minorities experienced slight decreases in rate. Suicide was the fourteenth leading cause of death in Nebraska, accounting for 959 deaths.

More than three-quarters (78.1 percent) of suicide victims in the state were males during the period 1998-2002. Based on 1998-2002 mortality data, each racial/ethnic minority group in Nebraska, including Native Americans, had a lower risk of suicide death than whites, although rates were not much lower for Native Americans (*Table 22, Figure 42*).



YEARS OF POTENTIAL LIFE LOST (YPLL) DUE TO SUICIDE

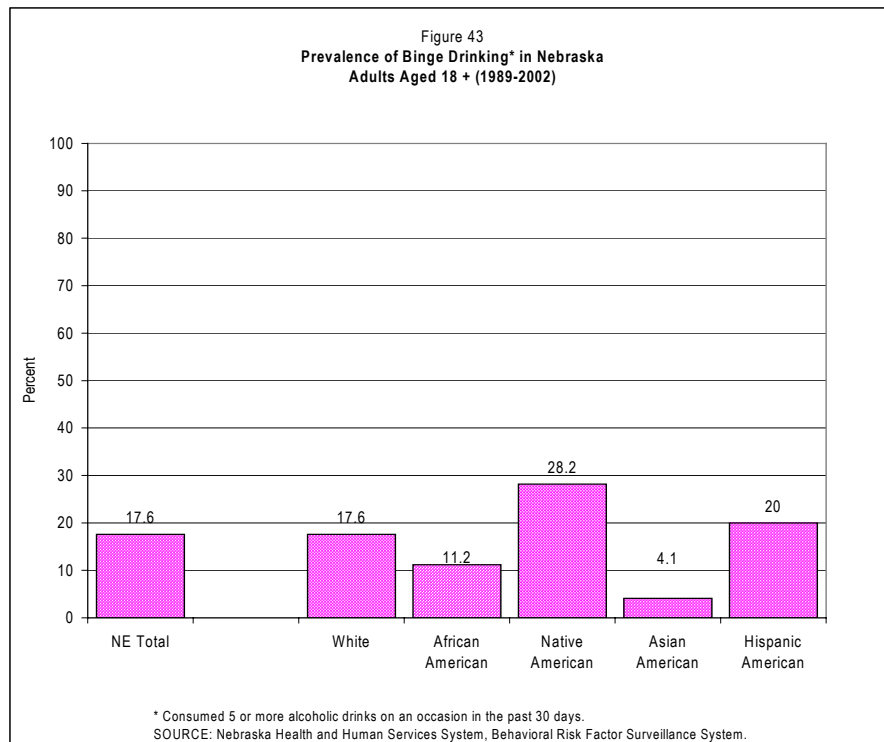
During 1998-2002, an average of 563.6 years of potential life were lost annually due to suicide among racial and ethnic minority populations in Nebraska over the last five-year period (*Table 23*). The number of years lost per person was 0.8 times higher for African and Native Americans as for white residents of Nebraska.

RISK FACTORS

Substance Abuse

Alcohol use precedes or accompanies one-third to two-thirds of all homicides and serious assaults. A similar review of studies showed that up to about one-third of suicide victims had a history of alcohol use or were drinking before their suicides. According to the Nebraska BRFSS, 17.6 percent of adult Nebraskans participated in binge drinking (consuming five or more alcoholic drinks on one occasion). Survey results indicate that 28.2 percent of Native Americans, 20 percent of Hispanic Americans, 17.6 percent of white Nebraskans, and 11.2 percent of

African Americans engaged in binge drinking during the thirty days preceding the survey (*Figure 43*). Four percent of Asian Americans reported having participated in binge drinking.



Access to Firearms

Ready access to firearms also increases the risk of suicide and homicide. Violent crimes constituted 24.7 percent of all crimes nationally, according to the Justice Department and the Federal Bureau of Investigation. There were 6.2 million rapes, armed robberies and aggravated assaults reported to police in the U.S. in 2000. Of these, 25.6 percent of the victims faced a perpetrator with a firearm. In 2000, Nebraska ranked 23rd nationally in violent crime.

“Gun violence is a priority issue for African-Americans and other minorities. Over 600,000 Americans are victimized in handgun crimes each year, and our minority communities are the hardest hit,” (Brady Center, 2002 p.1). In 1999, fire-arm homicides were the leading cause of death among African American men ages 15-34 as well as the number one cause of death for all African Americans 15-24 years of age, according to the NCHS. Also, of the 30,708 firearm-related deaths in the U.S. in 1998, 57 percent or 17,424 were suicides, while 12,102 or 39 percent were murders. Many experts consider immediate access to a firearm or other lethal weapon to be the deciding factor in turning a violent event into a homicide. Improper use of firearms caused 32,436 deaths among Americans in 1997 at the rate of 12.2 deaths per 100,000 population. Of all these deaths, only about 5 percent were the result of unintentional injuries. Suicides accounted for 48 percent and homicides 47 percent of total firearm injury deaths.

Poverty

Racial/ethnic minority status is associated with rates of violent crime that exceed rates for whites in the U.S. However, studies generally show that poverty (which is often more prevalent among racial and ethnic minority groups) is a more significant risk factor than race or ethnic origin for becoming a victim of violent crime or committing one.

PROGRESS TOWARD OBJECTIVES

Homicides

Slight progress has been made in Nebraska in reducing homicide rates among racial and ethnic minorities (*Table 24*). Compared to the 1993-1997 baseline, homicides among African Americans were down 8.3 percent in 1998-2002. Although Native Americans (166.7 percent) recorded a substantial percent increase in homicide rates, caution should be used here as the rate was based on a total of 14 deaths. A reduction of 91.1 percent in homicide deaths need to be made among this group in order to achieve the Nebraska Year 2010 health goals and objectives of no more than 2.0 deaths per 100,000 (Nebraska 2010 Health Goals and Objectives, 2002). For African Americans, and Hispanic Americans, large reductions in the homicides rate will need to be made in order to meet the Nebraska Year 2010 objective of no more than 2.0 homicide deaths per 100,000 population (*Table 24*).

Suicides

All racial and ethnic minority groups in Nebraska are targeted for suicide reductions. Slight progress has been made in Nebraska among the minority groups in reducing the suicide rates. With a reduction of close to 39 percent in suicide mortality rate of 8.6 per 100,000 population during the current five-year period 1998-2002, Native Americans came close to meeting the Nebraska Year 2010 objectives of no more than 8.2 suicide deaths per 100,000 population. To achieve the Nebraska Year 2010 objective of no more than 8.2 suicide deaths per 100,000, a reduction of about 5 percent in the rate would be necessary, among this group. African Americans met the Nebraska Year 2010 objective of no more than 8.2 suicide deaths, (*Table 24*).

Table 24
Violent and Abusive Behavior
Baseline, Current Data and Year 2010 Objectives
For U.S. and Nebraska Racial and Ethnic Minority Populations

Indicator and Target Groups	Nebraska Baseline (1993-1997)	Nebraska Current Rate (1998-2002)	NE % Change Current vs. Baseline	NE Year 2010 Objective	U.S. Current Rate (1998)	U.S. Year 2010 Objective
Deaths Due to Homicides/100,000 Population						
U.S.					6.5	3.0
Nebraska	3.4	3.2	-5.9	2.0	4.0	3.0
White	2.4	2.2	-8.3	2.0	4.0	3.0
African American	27.0	22.1	-18.1	2.0	22.6	3.0
Native American	8.4	22.4	166.7	2.0	9.1	3.0
Asian American	0.0	3.6	0.0	2.0	3.5	3.0
Hispanic	8.0	7.5	-6.3	2.0	8.8	3.0
Deaths Due to Suicides/100,000 Population						
U.S.					11.3	5.0
Nebraska	11.1	11.3	1.8	8.2	12.2	5.0
White	11.2	11.9	6.3	8.2	12.2	5.0
African American	7.8	7.7	-1.3	8.2	5.8	5.0
Native American	14.0	8.6	-38.6	8.2	12.6	5.0
Asian American	3.5	4.1	14.6	2.1	6.6	5.0
Hispanic	5.8	5.3	-8.6	4.7	6.3	5.0
*Rates, Age-adjusted to 2000 SOURCE: Nebraska Health and Human Services System, Vital Statistics 1993-1997 and 1998-2002, and Nebraska 2010 Health Goals and Objectives.						

DIABETES

OVERVIEW OF HEALTH IMPACT

Types of Diabetes

Type 1 Diabetes or Insulin-Dependent Diabetes Mellitus (IDDM) occurs when the body produces little or no insulin, and typically affects children and young adults but can occur at any age.

Type 2 Diabetes or Non-Insulin-Dependent Diabetes Mellitus (NIDDM), the most common form of diabetes, typically develops in adults and occurs when the body does not use insulin effectively. However, Type 2 diabetes has recently been diagnosed in children and adolescents.

Gestational Diabetes, according to the CDC “is a form of glucose intolerance that is diagnosed in some women during pregnancy.” Gestational diabetes is more common among African American, Hispanic and Native American women. It also occurs more frequently among obese women who have a family history of diabetes. Gestational diabetes is treated during pregnancy in order to stabilize the infant, thus avoiding complications. “After pregnancy, 5-10 percent of women with gestational diabetes are found to have Type 2 diabetes, and have a 20-50 percent chance of developing diabetes in the next 5-10 years,” the CDC stated. However, for most women who develop diabetes during pregnancy (gestational diabetes), diabetes does not persist after the pregnancy ends.

As of 2001, an estimated 80,439 Nebraskans 18 years and older (6.4% of the 2001 population) were diagnosed with diabetes and were aware of their condition, compared to 66,812 in 1996 – a 20.4 percent increase. It is believed that an additional one-third of the number of diagnosed cases have diabetes but have not been diagnosed. Diabetes often results not only in a shortened life span, but an increased probability of disabilities due to complications such as kidney disease, blindness, or lower extremity amputations. By applying improved treatment techniques and procedures, along with a change in lifestyle, these complications can often be delayed or prevented.

Cardiovascular disease is the leading cause of death for persons with diabetes, accounting for more than half of all deaths among this group nationally. Persons with diabetes are six to ten times more likely to be hospitalized for heart disease or stroke than persons who do not have diabetes. Persons with diabetes who also smoke, have high blood pressure or elevated blood cholesterol levels, or are overweight, are at increased risk of stroke or heart disease.

When deaths from diabetes as the underlying cause of death are considered, this disease ranks seventh overall in Nebraska.

Based on the number of deaths in Nebraska between 1998-2002, diabetes-related deaths (all deaths with diabetes as a contributing factor) ranked third for Native Americans, fifth for Hispanic Americans and fourth for African Americans in the state, with a rank of sixth for whites. There was no record of diabetes deaths for Asian Americans during 1993-1997; however, during 1998-2002, diabetes caused 22 deaths among Asian Americans.

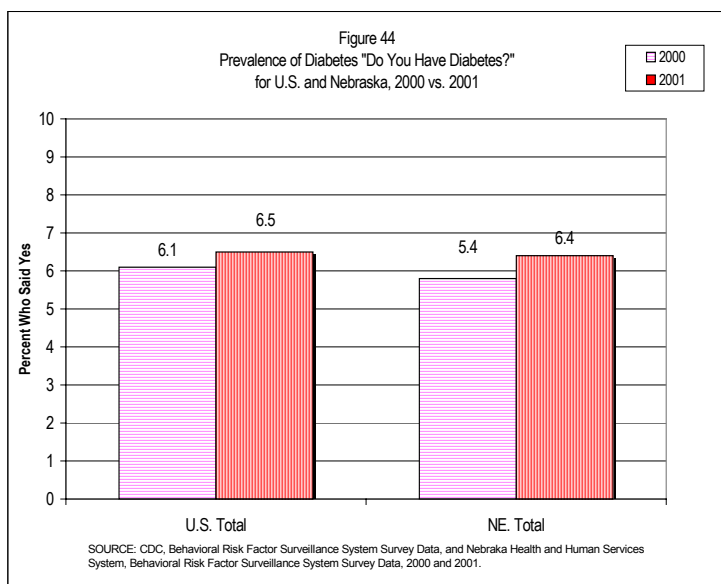
PREVALANCE OF DIABETES

National data indicate greater prevalence of diabetes among Native Americans, Hispanic Americans, and African Americans than among white Americans. According to the CDC and the NCHS, the number of Americans with diabetes in 2000 was 17.0 million or 6.2 percent of the population, as compared to 15.7 million (5.9 percent) in 1998. This indicates an increase of approximately 8.3 percent in the prevalence of diabetes between 1998 and 2000. In 2000, 11.1 million people were diagnosed with diabetes while another 5.9 million people were undiagnosed. The prevalence of diabetes among people under 20 years of age indicates that about 151,000 or 0.19 percent of the population have diabetes.

Nationwide, among people aged 20 years and older, 16.9 million people or 8.6 percent of the population have diabetes. Furthermore, the largest increase in diabetes prevalence in the 1990s

(76%) occurred among people aged 30-39, according to the American Association of Clinical Endocrinologists, (AACE). Those 65 years and older who have diabetes number 7.0 million or 20.1 percent of all people in that age group; 7.8 million or 8.3 percent of all men have diabetes while 9.1 million or 8.9 percent of all women have diabetes. Note that “prevalence was calculated based on the total number of people with diabetes – both diagnosed and undiagnosed”, according to the CDC and the National Health Interview Survey, 2000.

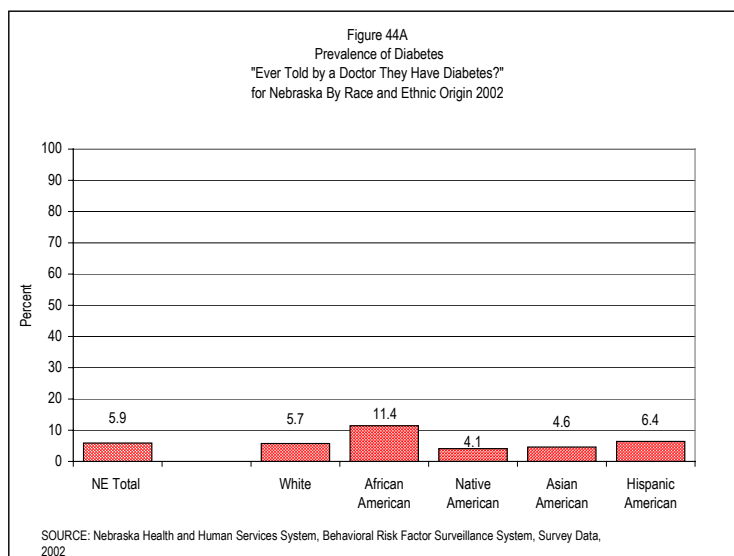
Results of the 2001 national and Nebraska BRFSS documented that when asked the question “Have you ever been told by a doctor that you have diabetes,” 6.5 percent of all U.S. and 6.4 Nebraska respondents 18 years and older self-reported that they have diabetes, (excluding gestational diabetics) (Figure 44)



CDC reported that a greater prevalence of diabetes occurs among African Americans, Native Americans, and Hispanics than among whites. In 2000, the national BRFSS data indicate that 6.1 percent of the adult population were aware of, or had been told by a doctor that they have diabetes. Prevalence rates for diabetes in Nebraska were 5.4 and 6.4 percent for 2000 and 2001 respectively (Figure 44). In Nebraska, the 2002 BRFSS indicated that 5.9 percent of adults 18 years and older (excludes gestational diabetics) stated that they were told at least once by a doctor that they have diabetes.

Based on responses to the Nebraska Behavioral Risk Factor Surveillance Survey, reported prevalence of diabetes among racial and ethnic minority populations in Nebraska varies. African (11.4 percent) and Hispanic Americans (6.4 percent) were far more likely than white Nebraskans (5.7 percent) to indicate they had ever been told by a doctor that they have diabetes. Native Americans (4.1 percent) and Asian (4.6 percent) Americans were about the same in reporting they had ever been told by a doctor they have diabetes (Figure 44A).

In 2001, a total of 1,001 racial and ethnic minorities participated in the Lincoln



Lancaster County 2001 Minority Behavior Risk Factor Survey (MBRFS). When asked: “Have you ever been told by a doctor that you have diabetes or high blood sugar?”, 8.0 percent of the respondents indicated they have been told by a doctor they have diabetes or high blood sugar.

DEATHS DUE TO DIABETES-UNDERLYING CAUSE

In Nebraska, during 1998-2002, there was a total of 1,909 diabetes as the underlying cause of deaths; the rates increased to 20.6 deaths per 100,000 population, compared to 16.8 deaths per 100,000 population in 1993-1997 (*Figure 45*).

Although Native Americans experienced a 30.5 percent increase and by far the highest rate of diabetes-underlying cause (112.1) of any racial group in Nebraska when compared to the 1993-1997 rate of 85.9 deaths per 100,000 population (*Figure 45*), caution should be exercised when analyzing and using this as data may have been based on small numbers. The trend indicate general steady increase in diabetes-underlying death rates across the state.

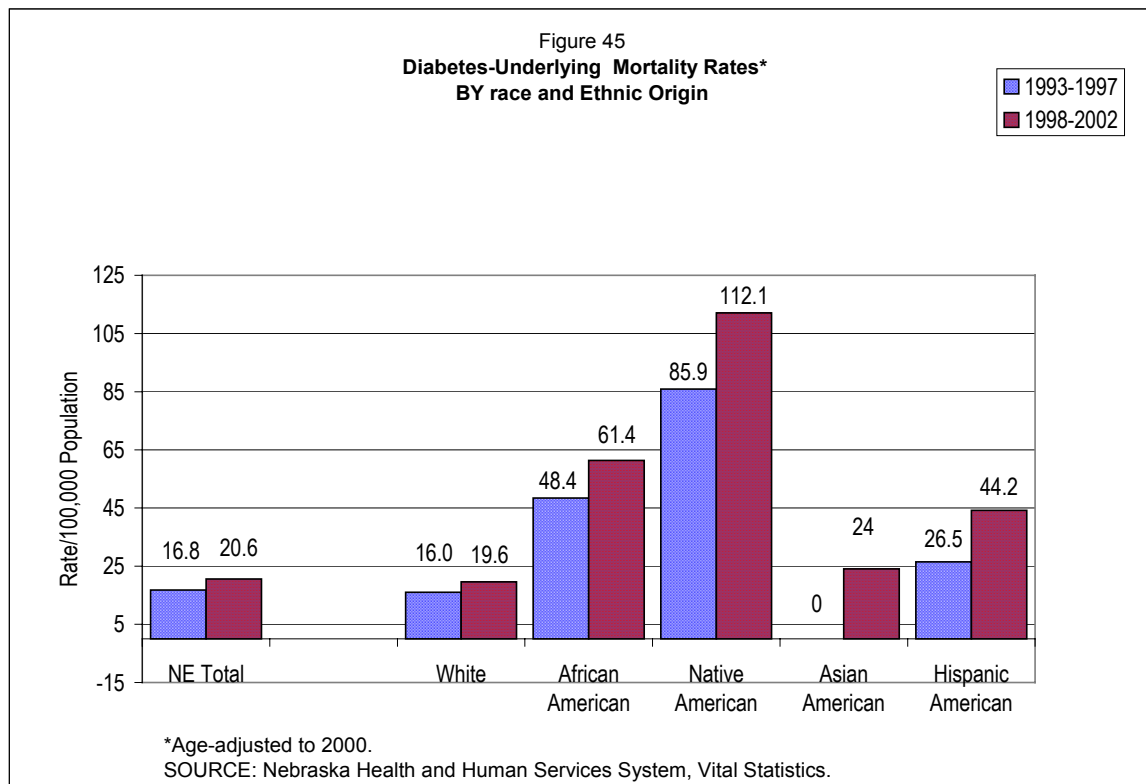


Table 25
Diabetes-Related Causes
Mortality Rates and Relative Risk of Mortality
For Nebraska Racial/Ethnic Minority Populations

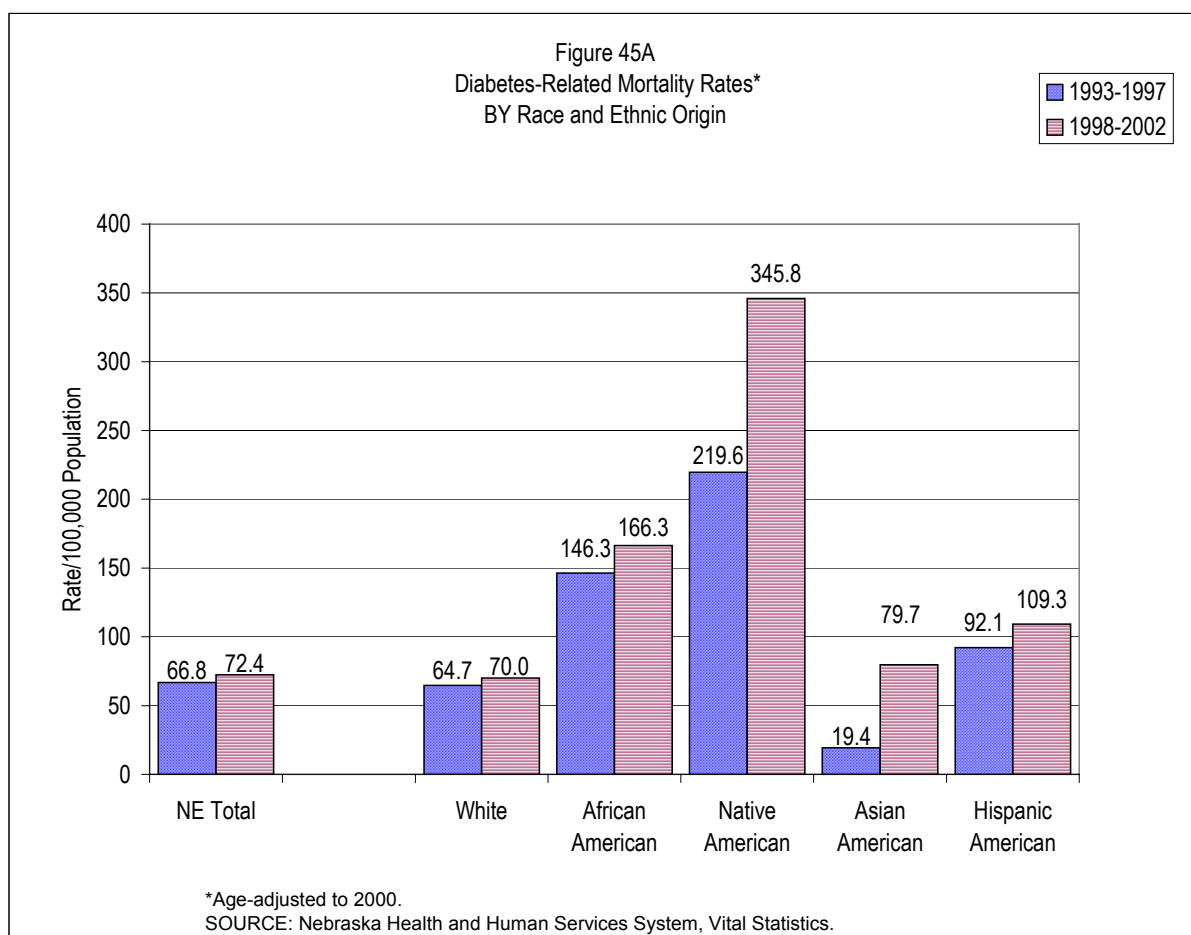
Category	1993-1997 Age- Adjusted* Mortality Rate per 100,000 population	Relative Risk			1998-2002 Age-adjusted* Mortality Rate per 100,000 Population	Relative Risk		
		Total	Males	Females		Total	Males	Females
Diabetes-Related Causes Nebraska Total	66.8				72.4			
White	64.7	1.0	1.0	1.0	70.0	1.0	1.0	1.0
African American	146.3	2.3	1.9	2.6	166.3	2.4	1.8	2.9
Native American	219.6	3.4	3.0	3.5	345.8	4.9	1.7	6.5
Asian American	19.4	0.3	0.2	0.4	79.7	1.1	1.0	1.2
Hispanic American	92.1	1.4	1.1	1.7	109.3	1.6	1.6	1.5
*Age-adjusted to 2000								
SOURCE: Nebraska Health and Human Services System, Vital Statistics data 1993-1997 and 1998-2002.								

DEATHS DUE TO DIABETES-RELATED CAUSES

Overall, the diabetes-related death rate in Nebraska increased by 8.4 percent to 72.4 deaths per 100,000 population for 1998-2002, compared to 66.8 deaths per 100,000 population in 1993-1997. Furthermore, Nebraska experienced a total of 6,785 diabetes-related deaths (all deaths listed on the death certificate having an underlying cause or also showing diabetes as a contributing factor) during 1998-2002. Altogether, a total of 12,774 diabetes-related deaths occurred in Nebraska in the 10-year period 1993-2002.

Figure 45A shows that during 1998-2002, Native Americans experienced the highest rate of diabetes-related deaths (345.8) of any racial and ethnic group in Nebraska. This rate represents a 57.5 percent increase compared to the 1993-1997 rate of 219.6. The relative risk of diabetes-related death for Native Americans was approximately 5 times higher than that of the white rate. (As in Figure 45, caution need to be applied when using data as it may have been based on small numbers). African Americans experienced an increase of 13.7 percent in diabetes-related mortality rates in 1998-2002 compared to the previous five-year period.

The diabetes-related death rate for African Americans was 2.4 times higher than the white death rate for this cause (*Table 25*). Although Asian Americans recorded an increase of 310.8 percent in diabetes-related mortality rates, this sharp increase may have been due in part to better reporting and coding of race in the second period 1998-2002. It may have also been due to increases in the size and composition of Asian population (e.g., by age). At a relative risk of 1.6 compared to whites, Hispanics recorded a slight increase of 18.7 percent in rates from 92.1 in 1993-1997 to 109.3 per 100,000 population during 1998-2002. (*Figure 45A, Table 25*).



TRENDS IN DIABETES DEATH RATES

During 1998-2002, age-adjusted death rates for diabetes in Nebraska increased for every racial and ethnic group, as in the nation. There were no deaths recorded with diabetes as an underlying cause for Asian Americans between 1993-1997 probably because of a younger population among this group. Figure 45 shows the age-adjusted mortality rates of diabetes as the underlying cause of death among Nebraska's racial and ethnic minorities for the five year period, 1998-2002. When the rates are compared to the previous five-year period 1993-1997, the diabetes age-adjusted death rates in Nebraska have increased for all racial and ethnic group in Nebraska

YEARS OF POTENTIAL LIFE LOST (YPLL) DUE TO DIABETES-RELATED CAUSES

Years of Potential Life Lost (to a disease, condition or cause) as a health indicator is important because it measures premature death. Table 26 shows total Years of Potential Life Lost (YPLL) to diabetes as a related cause of death among Nebraska's racial and ethnic minorities.

Table 26
Years of Potential Life Lost – Diabetes-Related Cause
Based on 75 Productive Years of Life
for Nebraska Racial and Ethnic Minority Populations

	1993-1997			1998-2002		
	# of Total YPLL	Age-Adjusted Rate/100,000	Minority -to- White Ratio*	# of Total YPLL	Age-Adjusted Rate/100,000	Minority -to- White Ratio*
Diabetes-Related Causes						
Nebraska Total	26,710	340.2		28,580	341.7	
White	24,049	318.4		25,126	321.2	
African American	1,747	815.4	2.6	2,396	968.0	3.0
Native American	884	2,149.8	6.8	953	2,161.8	6.7
Asian American	31	59.5	0.2	106	181.8	0.6
Hispanic American	702	510.2	1.6	830	442.1	0.1
Average/YPLL (Minorities)	672.8			857		
*Minority Age-Adjusted YPLL Rate/100,000 divided by White Age-Adjusted YPLL Rate/100,000 using 2000 U.S. Census SOURCE: Nebraska Health and Human Services System, Vital Statistics						

During 1998-2002 altogether, a total of 4,285 YPLL, or an average of 857 years of potential life annually, were lost due to diabetes-related deaths among racial and ethnic minorities in Nebraska over the ten-year period. African Americans lost a total of 2,396 YPLL at the rate of 968.0 years of potential life per 100,000 population, while Native American and Hispanics lost 953 and 830 YPLL respectively. However, the age-adjusted YPLL rate was highest among Native American (2,161.8/100,000 population), with a relative risk of 6.7 times the rate for whites.

WARNING SIGNS OF DIABETES

According to the Health Fitness Foundation, Inc., warning signs of Type 1 Diabetes Mellitus include:

- Frequent urination (in large quantities), excessive thirst, extreme hunger, rapid weight loss,
- Fatigue (weak and tired), irritability and mood changes, nausea and vomiting, high amounts of sugar in the blood/or urine. These symptoms occur suddenly and must receive immediate medical attention.

Signs and symptoms of Type 2 Diabetes Mellitus include:

- Blurred vision, tingling or numbness in the legs, feet or fingers, frequent infection of the skin,
- Recurring skin, gum or urinary tract infections, itching of skin and/or genitals, drowsiness,
- Slow healing of cuts and bruises.

- Any of the symptoms listed under Type 1 Diabetes. These symptoms occur gradually, and they are no less important than those under Type 1 Diabetes and must also receive immediate medical attention, according to the Health Fitness Foundation, Inc.
- Type 2 diabetes may not have any signs or symptoms.

RISK FACTORS

Overweight and Obesity

The prevention and control of obesity is of major importance in preventing and controlling non-insulin-dependent (Type 2) diabetes. Roughly half of all Type 2 cases are thought to be the result of obesity. Since approximately 90 percent of diabetes cases are Type 2, it is estimated that about 45 percent of all diabetes mellitus cases could be prevented through control of obesity, according to the Center for Disease Control and Prevention.

The prevalence of overweight has been increasing both in Nebraska and nationwide. In Nebraska, 37.2 percent of adults reported heights and weights that placed them in the overweight category (using the Body Mass Index of 25-29) in the 1998-2002 BRFSS. This survey found that, Hispanic Americans (39.4 percent), African Americans (37 percent), and Native Americans (32.7 percent) reported a high prevalence of being overweight as well as Nebraskans (37.1) overall. The 2002 BRFSS found that 23.2 percent Adult Nebraskans 18 years and older, reported being obese, while during 1998-2002, 20.9 percent self-reported being obese (based on a BMI of 30+). In 2002, 33.4 percent of African Americans self-reported being obese while the 1998-2002 BRFSS found that close to one-third of African Americans (31.5 percent) self-reported that they were obese. While more than one-fourth of Hispanic Americans (21.9 percent) were obese during 1998-2002, in 2002, 27.2 percent were classified as obese. In 2002, although based on a small number, 50.9 percent of Native Americans fell in the category of being obese, caution should be applied when using this especially when during 1998-2002, only one-fourth (24.8 percent) reported being obese. Although 21.0 percent of Asian Americans were classified as over weight, only six percent were obese during 1998-2002. In 2002 only 5.5 percent were reported as being obese.

PROGRESS TOWARD OBJECTIVES

Table 25 indicates that there was a general increase in the diabetes-related death rate among all racial and ethnic groups in Nebraska. As shown in Table 27, the Year 2010 objectives for Nebraska and the nation has identified all of these groups as targets for reductions in diabetes mortality. In Nebraska, the rationale for targeting Native Americans is especially compelling, given the fact that diabetes-related deaths for them are considerably in excess of national figures.

Table 27
Diabetes-Related Deaths
 Baseline, Current Data and Year 2010 Objectives
 For U.S. and Nebraska Racial and Ethnic Minority Populations

U.S. and Nebraska Healthy People 2010 Goals and Objectives						
	Nebraska Baseline (1993- 1997)	Nebraska Current Rate (1998-2002)	% Change Current vs. Baseline	Nebraska Year 2010 Objectives	National Current Rate 1997	National Year 2010 Objectives
Diabetes age-adjusted Mortality Rate/100,000 Population: (NE Total)	66.8	72.4	8.4	25.0	75	45.0
White	64.7	70.0	8.2	25.0	70	39.9
African American	146.3	166.3	13.7	25.0	130	74.1
Native American	219.6	345.8	57.5	25.0	107	61.0
Asian American	19.4	79.7	310.8	25.0	62	35.3
Hispanic American	92.1	109.3	18.7	25.0	86	49.0
SOURCE: Mortality Data – Nebraska Vital Statistics, 1993-1997 and 1998-2002; U.S. and Nebraska 2010 Health Goals and Objectives						

There is no evidence to suggest that diabetes-related mortality rates for Native Americans (345.8) and African Americans (166.3) in Nebraska are decreasing. There was a sharp increase of 310.8 percent in the diabetes-related death rate for Asian Americans. In order to achieve the national and Nebraska 2010 health goals and objectives, a reduction of the following percentages would be required for Native Americans (92.8. percent), African Americans (85.0 percent), Hispanic Americans (77.1 percent) and Asians (68.6 percent).

Since obesity is a risk factor for development of both Type 2 and for cardiovascular disease (the leading cause of death for persons with diabetes), achievement of the Year 2010 objective seeking to reduce the prevalence of being overweight would also aid in lowering diabetes-related death rates. The Prevalence of overweight/obesity is generally higher among Native Americans, African Americans, and Hispanic Americans than among adult Nebraskans overall. These groups have been targeted for reduction in prevalence of overweight and obesity.

CIRRHOSIS

OVERVIEW OF HEALTH IMPACT

In 2000, cirrhosis of the liver was the 12th leading cause of death nationwide. The disease is largely attributable to heavy alcohol consumption. The National Center for Health Statistics, (NCHS) reports that nationwide, cirrhosis is the cause of 26,552 deaths annually in 2000, at a mortality rate of 9.6 deaths per 100,000 population. Cirrhosis also was responsible for 353,000 hospital discharges in 1999, the CDC stated. Death rates for cirrhosis are highest among Native Americans and African American males in the U.S.

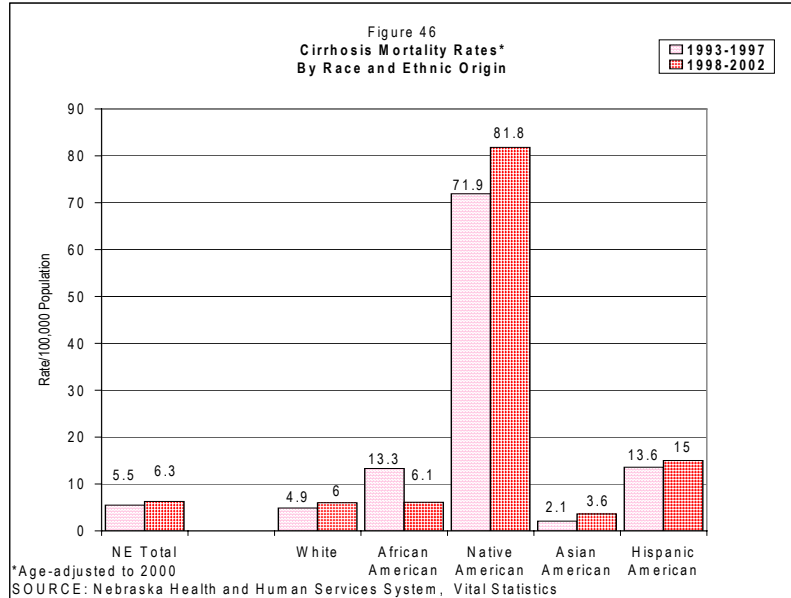
Table 28
Cirrhosis
Mortality Rates and Relative Risk of Mortality
For Nebraska Racial and Ethnic Minority Populations
1993-1997 vs. 1998-2002

Category	1993-1997 Age-Adjusted* Mortality Rate Per 100,000 Population	Relative Risk: Total	1998-2002 Age-Adjusted* Mortality Rate Per 100,000 Population	Relative Risk: Total	Percent Change 1993-1997 vs 1998-2002
Cirrhosis					
Nebraska	5.5		6.3		14.5
White	4.9		6.0		22.4
African American	13.3	2.7	6.1	1.0	-54.1
Native American	71.9	14.7	81.8	13.6	13.8
Asian American	2.1	0.4	3.6	0.6	71.4
Hispanic American	13.6	2.8	15.0	2.5	10.3
*Age-adjusted to 2000 SOURCE: Nebraska Health and Human Services System, Vital Statistics data 1993-1997 and 1998-2002.					

DEATHS DUE TO CIRRHOSIS

There was a 14.5 percent increase in the mortality rate for cirrhosis of the liver (6.3 deaths per 100,000) in Nebraska during 1998-2002. The previous rate of 5.5 occurred from 1993-1997. Table 28 presents cirrhosis mortality rates for Nebraska minorities and the relative risk for each group while *Figure 46* shows mortality rates compared to white residents of the state.

Although the cirrhosis death rate has increased by 14.5 percent for Nebraskans



overall, among Native Americans in Nebraska the 1998-2002 mortality rate due to cirrhosis (81.8 deaths per 100,000 population) represents a 13.8 percent increase from the 1993-1997 rate of 71.9 deaths per 100,000 population. Native Americans were 13.6 times as likely as white Nebraskans to die from cirrhosis of the liver during the latest five-year period.

Among the state's African American population, the 1998-2002 cirrhosis mortality rate (6.1) was roughly equal to the rate for white Nebraskans, (6.0). The cirrhosis mortality rate for Hispanic Americans rose by 10.3 percent from the previous five-year period, increasing from 13.6 to 15.0 deaths per 100,000 population in 1998-2002. In the latest period, Hispanic Nebraskans were 2.5 times as likely as white residents to die from cirrhosis of the liver.

YEARS OF POTENTIAL LIFE LOST (YPLL) DUE TO CIRRHOSIS

Altogether, an estimated 348 YPLL were lost each year among racial or ethnic residents of Nebraska due to cirrhosis of the liver from 1998 through 2002. This number represents a 31.7 percent decrease from the previous period (*Table 29*), when an average of 509.3 YPLL were lost each year.

Table 29
Years of Potential Life Lost-Cirrhosis
Based on 75 Productive Years of Life
For Nebraska Racial and Ethnic Minority Populations

Category	1993-1997			1998-2002		
	# of Total YPLL	Age-Adjusted Rate/100,000	Minority -to- White Ratio*	# of Total YPLL	Age-Adjusted Rate/100,000	Minority -to- White Ratio*
Cirrhosis NE Total	7,361	95.7		8,727	105.6	
White	5,755	78.4		7,623	99.9	
African American	650	278.2	3.6	327	121.3	1.2
Native American	942	1,823.0	23.3	736	1,384.5	13.9
Asian American	16	32.4	0.4	0	0.0	0.0
Hispanic American	429	190.0	2.4	329	142.1	1.4
Average/Year (Minorities)	509.3			348.0		
*Minority Age-Adjusted YPLL Rate/100,000 divided by White Age-Adjusted YPLL Rate/100,000						
SOURCE: Nebraska Health and Human Services System, Vital Statistics.						

The YPLL rate due to cirrhosis per 100,000 population for Native Americans (1,384.5) has decreased, but was still nearly 14 times as high as the rate among white Nebraskans in 1998-2002. The YPLL rate due to this cause of death for African Americans (121.3) in Nebraska

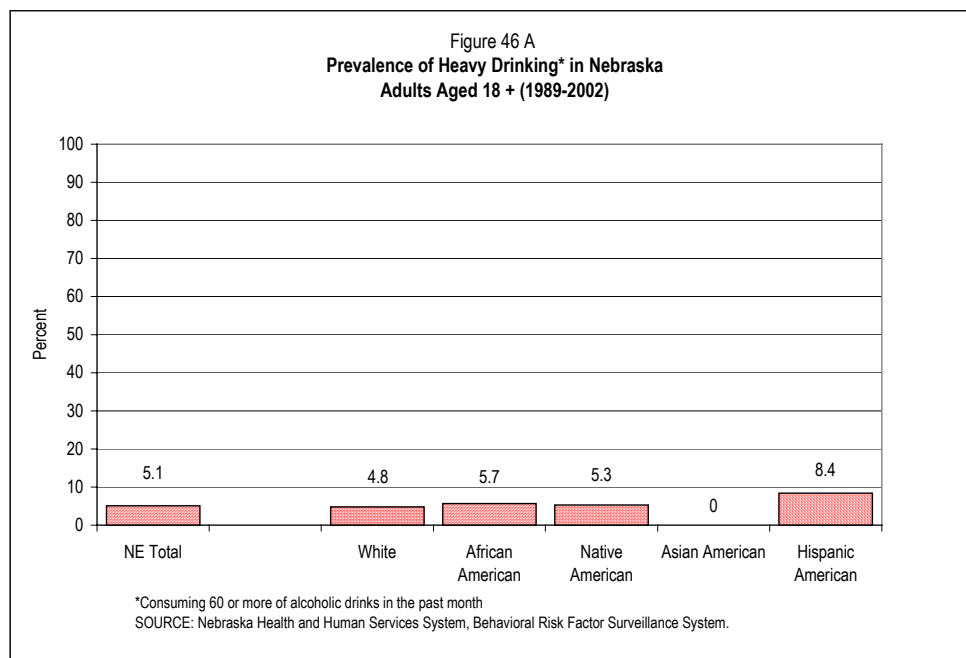
decreased substantially compared to the previous five-year period. The current rate of YPLL per 100,000 for African Americans was 1.2 times the rate for whites. The number of potential years of life lost due to cirrhosis per 100,000 population has decreased by 25.6 percent for Hispanic Americans (142.1) in Nebraska compared to the previous period, (*Table 29*). Hispanic Americans in Nebraska lost 1.4 times as many years of potential life per 100,000 population as white Nebraskans in 1998-2002.

RISK FACTORS

Substance Abuse

Altogether, the amount of alcohol consumption and the duration of consumption increase the risk of cirrhosis. Recent estimates indicate that 50 to 90 percent of all cirrhosis deaths are caused by alcohol abuse. “Binge drinking” is defined as consuming five or more alcoholic drinks on one occasion. Nearly eighteen percent of Nebraskans responding to the combined 1989-2002 state BRFSS reported binge drinking during the past month among racial and ethnic minorities in the state. A little over 28 percent of Native Americans, 20 percent of Hispanic Americans, 11.2 percent of African Americans, and 4.1 percent of Asian Americans participated in binge drinking during the thirty days before the survey (*Figure 43*).

“Heavy drinking” is defined as consuming 60 or more alcoholic drinks in the past month. According to the combined results of the 1989-2002 Nebraska Behavioral Risk Factor Surveillance System’s surveys, 5.1 percent of adult Nebraskans participated in heavy drinking. Survey results indicate that 8.4 percent of Hispanic Americans, 5.6 percent of African Americans and 5.3 percent of Native Americans participated in heavy drinking, consuming more than 60 alcoholic beverages in the past month. There were no recorded cases for Asian Americans (*Figure 46A*).



PROGRESS TOWARD OBJECTIVES

“Objective #26-2 seeks to reduce cirrhosis deaths to no more than 3.0 per 100,000 population in Nebraska and nationwide.” Therefore, special population groups targeted for cirrhosis mortality reductions in Nebraska include African American, Native Americans, and Hispanic Americans (*Table 30*). Table 28 indicates that slight increases were recorded across Nebraska in cirrhosis mortality rates, except for African Americans who witnessed a significant decrease in rates from 13.3 during 1993-1997 to 6.1 deaths per 100,000 in 1998-2002. This translates to a decrease of 54.1 percent, (*Table 30*). Increases in cirrhosis mortality rates were recorded for all others, Native Americans, (13.8 percent), Hispanic Americans (10.3 percent) and with Asian Americans (71.4 percent –caution in analyzing: may be based on a small number of deaths). Substantial reductions need to be made in cirrhosis death rates among all racial and ethnic groups in order to meet the Nebraska 2010 Health Goals and Objectives.

Table 30
Cirrhosis
Baseline, Current Data and Year 2010 Objectives
For U.S. and Nebraska Racial and Ethnic Minority Populations

U.S. and Nebraska Healthy People 2010 Goals and Objectives						
Indicators and Target Groups	Nebraska Baseline (1993--1997)	Nebraska Current Rate (1998-2002)	% Change Current vs. Baseline	Nebraska Year 2010 Objectives	National Current Rate (1998)	National Year 2010 Objectives
Deaths Due to Cirrhosis/100,000 Population						
NE Total	5.5	6.3	14.6	3.0	9.5	3.0
White	4.9	6.0	22.5	3.0	9.4	3.0
African American	13.3	6.1	-54.1	3.0	9.9	3.0
Native American	71.9	81.8	13.8	3.0	25.9	3.0
Asian American	2.1	3.6	71.4	1.2	3.5	3.0
Hispanic American	13.6	15.0	10.3	3.0	15.4	3.0
SOURCE: Mortality Data – Nebraska Vital Statistics, 1993-1997 and 1998-2002; U.S. and Nebraska 2010 Health Goals and Objectives						

SEXUALLY TRANSMITTED DISEASES (STDs)

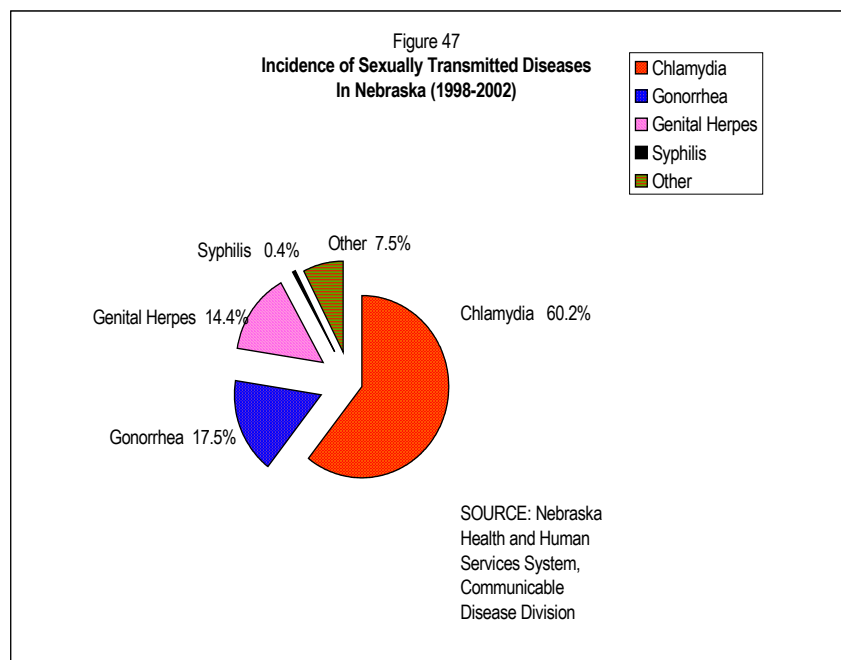
OVERVIEW OF HEALTH IMPACT

According to information from the CDC,

“Every year more than 12 million cases of sexually-transmitted disease (STDs) are reported in the United States. These infections result in billions of dollars in preventable health care spending. In addition, the health impact of STDs is particularly severe for women. Because the infections often cause few or no symptoms and may go untreated, women are at risk for complications from STDs, including ectopic (tubal) pregnancy, infertility, chronic pelvic pains, and poor pregnancy outcomes.” (CDC, 1997, p.1).

Sexually Transmitted Diseases disproportionately affect the young, the poor and racial and ethnic minorities. Cervical cancer is also a potential consequence of sexually transmitted infections. STDs and HIV infection are also linked by common risk behaviors; that is, persons who are at high risk for contracting sexually transmitted diseases are also at high risk of acquiring HIV. The presence of STDs has been documented as increasing the transmission and acquisition of HIV infection. In the United States, the seven most common STDs affecting the health of Americans are: chlamydia, trichomoniasis, gonorrhea, genital warts, genital herpes, hepatitis B, and syphilis. In 2000, chlamydia was the most commonly reported sexually transmitted disease in the United States (702,093 new cases or 257 per 100,000 population). Gonorrhea ranked second with 358,995 cases (132 per 100,000). The number of cases of syphilis was much smaller (31,575 new cases, or 12 per 100,000 population).

In Nebraska, there were, 6,936 reported cases of all STDs combined in 2002, while during 1998-2002, all STDs combined numbered 30,127 at the rate of 352.1 per 100,000 population. Of the total, chlamydia accounted for 60.2 percent or 18,131 of all STD cases in the state during 1998-2002 (*Figure 47*).



In Nebraska, the number of gonorrhea cases slightly decreased from 22.7 percent in 1993-1997 to 17.5 percent in 1998-2002. This represents a total of 5,267 cases at the rate of 179.7 per 100,000 population. In 2002 there were a total of 1,423 cases. Genital herpes recorded a slight decrease in the number of cases, totaling 4,344 (50.8 cases per 100,000) or 14.4 percent of all STD cases in Nebraska during the most recent five-year period (1998-2002), while syphilis accounted for a small proportion (0.4 percent). The number of reported cases of syphilis was relatively small (37) in Nebraska in 1998-2002. Other STDs comprised about 7.5 percent of all cases of sexually transmitted diseases.

CURRENT RATES

For purposes of this analysis, cases with unknown race or ethnicity were allocated using the distribution of known race/ethnicity cases. In Nebraska, during 1998-2002, STD incidence revealed an increase in rates across several racial and ethnic groups. The incidence rate for all STDs in Nebraska was 352.1 per 100,000 population. Incidence rates were recorded for minority groups as follows: African Americans (3,469.7), Native Americans (1,220.5), Hispanic Americans (629.1) and Asian Americans (315.4) per 100,000 population compared to whites (219.8/100,000). Trends in relative risk of STD infection in the last five years were mixed for racial and ethnic minority groups in Nebraska. (*Figure 48*)

The statewide incidence rates demonstrate that rates for African Americans were much higher than rates for any other racial/ethnic group in Nebraska for 1998-2002. Incidence rates for this population group has increased by about 4.1 percent from the previous five-year period. African Americans were approximately sixteen times as likely as white Nebraskans to contract a sexually transmitted disease (*Table 31*).

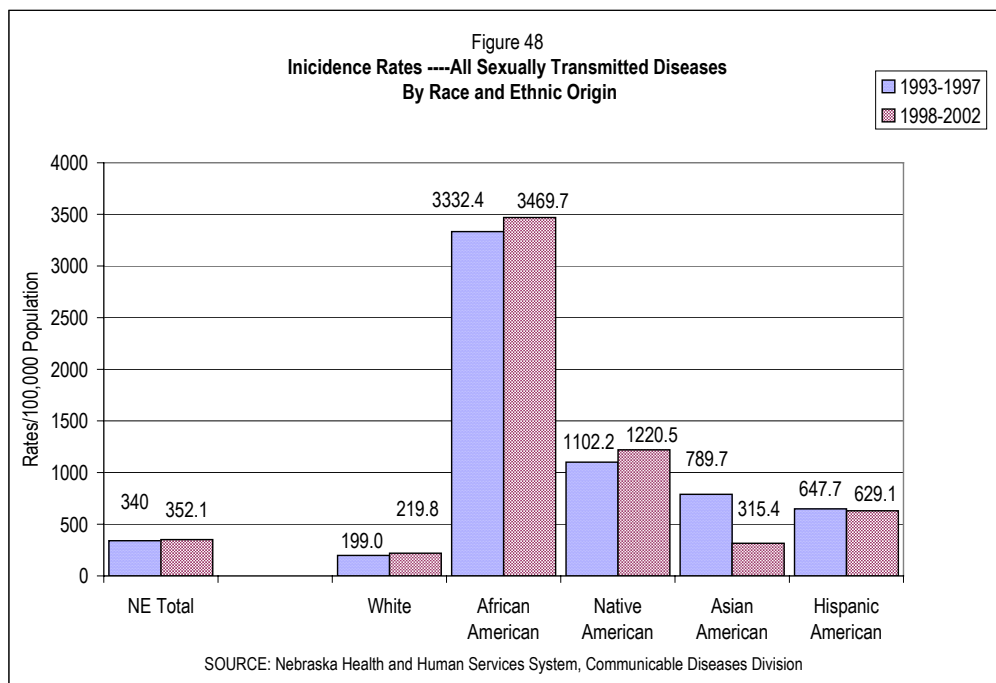


Table 31
Sexually Transmitted Diseases (STDs)
Incidence Rates and Relative Risk of Infection
For Nebraska Racial and Ethnic Minority Populations

	1993-1997		1998-2002	
	Incidence Rate Per 100,000 Population	Relative Risk	Incidence Rate Per 100,000 Population	Relative Risk
All STD's				
NE Total	340.0		352.1	
White	199.0		219.8	
African American	3,332.4	16.7	3,469.7	15.8
Native American	1,102.2	5.5	1,220.5	5.6
Asian American	789.7	4.0	315.4	1.4
Hispanic American	647.7	3.3	629.1	2.9
Chlamydia				
NE Total	179.7		221.8	
White	117.3		142.7	
African American	1,503.9	12.8	1,953.5	13.7
Native American	739.0	6.3	946.4	6.6
Asian American	416.6	3.6	247.6	1.7
Hispanic American	438.8	3.7	751.7	5.3
Gonorrhea				
NE Total	78.6		79.8	
White	21.8		27.3	
African American	1,438.5	66.0	1,329.1	48.7
Native American	160.0	7.3	165.1	6.0
Asian American	108.4	5.0	40.4	1.5
Hispanic American	77.1	3.5	76.9	2.8
Herpes				
NE Total	61.6		50.8	
White	50.0		50.0	
African American	314.5	6.3	213.3	4.3
Native American	137.8	2.8	59.0	1.2
Asian American	106.3	2.1	36.0	0.7
Hispanic American	56.8	1.1	50.8	1.0
Syphilis				
NE Total	1.2		0.4	
White	0.4		0.2	
African American	19.0	47.5	4.7	23.5
Native American	4.2	10.5	1.3	6.5
Asian American	1.1	2.8	4.4	2.2
Hispanic American	1.7	4.3	1.3	6.5
SOURCE: Nebraska Health and Human Services System, Communicable Diseases Division				

Incidence of sexually transmitted infections increased by 10.7 percent for Native Americans to 1,220.5 in the current period 1998-2002 from 1,102.2 in the previous five-year period, 1993-1997. Native Americans were 5.6 times more likely than whites to contract sexually transmitted diseases. Although this rate represented a decrease from 1993-1997, STD incidence was 2.9 times as high for Hispanic Americans as for whites in the state. Among Asian Americans, STD incidence rates declined substantially from 789.7 per 100,000 population in 1993-1997 to 315.4 per 100,000 population during 1998-2002. The relative risk of STD infection for Asian Americans was 1.4 times the rate for whites in 1998-2002.

Chlamydia. In Nebraska, in 1998-2002, incidence rates for chlamydia infections increased by about 30 percent for African Americans – from 1,503.9 per 100,000 population in 1993-1997 to 1,953.5 in 1998-2002. Native Americans, Hispanic Americans and whites, all experienced increases in incidence rates for chlamydia. However, rates for Asian Americans decreased compared to 1993-1997. Reported incidence of chlamydia was 13.7 times as high for African Americans as for whites. For other groups, increased incidence resulted in a higher relative risk except for Asian Americans (from 3.6 to 1.7). For Native Americans, incidence was 6.6 times the white rate. Hispanic Americans also experienced higher rates of chlamydia infections, 5.3 times the white rate (*Table 31*).

Gonorrhea. Gonorrhea rates slightly increased for whites and Native Americans. There were slight decreases in incidence of gonorrhea for African Americans and Hispanics, although African Americans still experienced a relative risk 48.7 times the white rate. Incidence of gonorrhea among Native Americans was 6.0 times the rate for white Nebraskans, while among Hispanics, incidence of gonorrhea was 2.8 times the white rate. Asian Americans recorded a significant decrease of 62.7 percent in incidence of gonorrhea and with relative risk decreasing to 1.5 times the rate for whites in 1998-2002 when compared to 1993-1997 (*Table 31*).

Herpes. Genital herpes incidence rates were down for every racial/ethnic minority group and seemed stabilized for whites in Nebraska during 1998-2002. For Asian Americans, incidence was down by 66.1 percent. Although the incidence rate for African Americans declined by 32.2 percent, the 1998-2002 rate of 213.3 new cases per 100,000 population was still 4.3 times as high as the current rate for whites. Native Americans recorded a significant decrease of 57.2 percent in the incidence rate of new cases. Native Americans also experienced a decreased relative risk rate of 1.2 times and were as likely as white Nebraskans to become infected with genital herpes. The incidence rate for Hispanic Americans showed an increase of 10.6 percent while being as likely as whites to contract herpes (*Table 31*).

Syphilis. Syphilis incidence rates decreased for all racial and ethnic groups in Nebraska, except for Asian Americans. Although African Americans registered a lower rate of about 4.7 cases per 100,000 population, the relative risk was 23.5 in 1998-2002 compared to whites. Both Native Americans and Hispanic Americans were 6.5 times each as likely as whites to contract syphilis (*Table 31*).

RISK FACTORS

High Risk Sexual Behaviors

Number of Sexual Partners: Abstinence or sexual intercourse with one mutually faithful uninfected partner is the only totally effective strategy against STDs. Reducing the number of sexual partners will decrease, but not eliminate, the risk of infection.

Unprotected Intercourse: The use of condoms during sexual intercourse can reduce the risk of infection by sexually transmitted organisms.

Adolescent Intercourse: Roughly four million teenagers contract an STDs annually, so that by the age of 21, approximately one out of every five Americans has required treatment for an STD. The most common method of birth control used by young women, the oral contraceptive pill, does not protect against STDs. Increasing to 90 percent, the proportion of adolescents in grades 9-12 who abstain from sexual activity has been included as a national objective number 25-2 for the year 2010, not only to reduce the incidence of STDs among adolescents, but to also lower the rate of teenage pregnancy.

PROGRESS TOWARD OBJECTIVES

As shown in (*Table 32*), progress has been made in Nebraska in decreasing the incidence of gonorrhea among Asian Americans (by about 49.5 percent since 1993-1997 through 1998-2002). A further reduction of almost 58 percent will be needed to meet the Nebraska Year 2010 goals and objectives. Only a slight increase of about 0.8 percent was recorded by African Americans. However, Hispanics recorded an increase of about 60 percent, while Native Americans increased by 13.3 percent in the incidence of gonorrhea. A significant reduction in the incidence of syphilis among African Americans has been achieved in Nebraska, with the 1998-2002 syphilis rate decreasing by 76.5 percent from the baseline. A further reduction of 96 percent will be necessary to reach the year 2010 objective of 0.2 cases per 100,000 population.

Table 32
Sexually Transmitted Diseases
Baseline, Current Data and Year 2010 Objectives
For U.S. and Nebraska Racial and Ethnic Minority Populations

U.S. and Nebraska Healthy People 2010 Goals and Objectives								
Indicators and Target Groups	Nebraska Baseline (1993--1997)	Nebraska Current Rate (1998-2002)	% Change Current vs. Baseline	Nebraska Year 2010 Objectives	National Baseline (1997)	National Current Rate (2000)	% Change Current vs. Baseline	National Year 2010 Objectives
Cases of Gonorrhea/ 100,000 Population					109.9	131.6	20.1	19.0
NE Total	80.0	80.0		17.0				19.0
White	20.0	27.3	36.5	17.0	*	28.0	*	19.0
African American	1,320.0	1,330.0	0.8	17.0	*	827.0	*	19.0
Native American	150.0	170.0	13.3	17.0	*	114.4	*	19.0
Asian American	80.0	40.4	-49.5	17.0	*	30.0	*	19.0
Hispanic American	50.0	80.0	60.0	17.0	*	78.1	*	19.0
Cases of primary & secondary Syphilis/ 100,000 Population					3.2	12	275.0	0.2
African American	20.0	4.7	-76.5	0.2				0.2
* Baseline data not available and so percentage change could not be calculated. SOURCE: Mortality Data – Nebraska Vital Statistics, 1993-1997 and 1998-2002; U.S. and Nebraska 2010 Health Goals and Objectives								

HIV/AIDS

OVERVIEW OF HEALTH IMPACT

In 1981, AIDS (Acquired Immunodeficiency Syndrome) was identified as a new infectious disease in the United States. By the end of 2001, the cumulative number of AIDS cases reported to the CDC is more than 816,149 nationwide. Of these, adult and adolescent AIDS cases totaled 807,074 with males contributing 82.5 percent or 666,026. Females

contributed 141,048 or 17.5 percent. Furthermore, the CDC has documented that as of December 31, 2001, 467,910 deaths among people with AIDS, 462,653 adults and adolescents and 5,257 children under age 13, as well as 360 persons whose age at death were not known. AIDS is now the fifth leading cause of deaths in the U.S. among people aged 25 to 44, and is the leading cause of death for African American men in this age group, according CDC's HIV/AIDS Statistics, NIAID Fact Sheet of December, 2002.

According to CDC, more people in the U.S. than ever before are living with the human immunodeficiency virus (HIV). As of December 2002, CDC's latest estimates indicate that 850,000 to 950,000 people in the United States are currently infected with HIV.

However, CDC estimates that one-quarter or 212,500 to 237,500 of these persons may not be aware of their infection, while 362,827 people in the U.S. were living with AIDS as of the end of 2001. Nationwide, of the estimated 15,603 AID-related deaths in the U.S. in 2001, approximately 52 percent were among African Americans, 29 percent among whites, 18 percent among Hispanics, and less than 1 percent among Asians/Pacific Islanders and American Indians/Alaska Natives, according to CDC.

HIV infection rates appear to have leveled off at about 40,000 new infections per year, with 35,575 new cases reported from January to December 2001.

Although no currently available treatment has been found to cure AIDS/HIV infection, the use of highly active antiretroviral treatment (HAART) has been found to slow the progression of HIV to AIDS. The need for prevention of HIV infection remains and must currently be accomplished primarily through modification of personal risk behaviors.

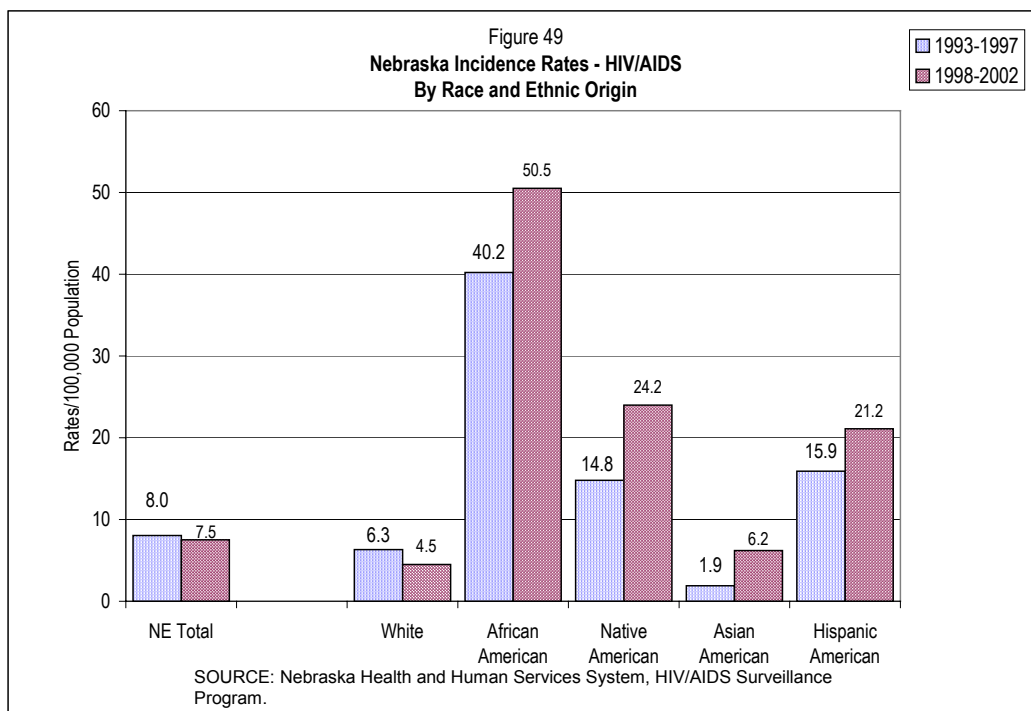
Disparities in the rate of infection among certain racial and ethnic groups, particularly high rates for African Americans and Hispanic Americans, remain a challenge. New treatments have reduced illness, disability and death due to HIV/AIDS, but lack of access to culturally and linguistically appropriate testing and care may limit progress in this area.

In Nebraska, through June 30, 2003, the total number of AIDS cases reported since record keeping began in January 1983 were 1,265. Of these males accounted for 85.6 percent (1,083) and females, 14.4 percent (182). A little over two-thirds (867) of all AIDS cases in the state (68.5 percent) occurred among the white population. Approximately 20 percent or 251 of the cases were diagnosed among African Americans and 9.6 percent or 121 among Hispanic Americans. Asian Americans accounted for only 8 of the total cases while Native Americans accounted for 18 or 1.4 percent of all AIDS cases. In retrospect, as of June 30, 2002, the total number of AIDS cases reported since January 1983 were 1,197.

In 2002, there were a total of 50 HIV and 72 AIDS cases reported in Nebraska. AIDS cases were at a rate of 4.2 per 100,000 population. To date, a total of 679 persons are known to have died from AIDS, while 557 are still living, according to the HHSS HIV/AIDS Surveillance Report, December 2002.

INCIDENCE

According to the CDC, the incidence of AIDS increased more rapidly among African Americans and persons of Hispanic origin than among white Americans. In 2001, African Americans (49 percent) and Hispanic Americans (19 percent) together accounted for more than two-thirds of the national total. These groups only comprised 25 percent of the total U.S. population – African Americans, 12 percent and Hispanics, 13 percent. As in past years, most women with AIDS were African American or Hispanic American. For instance, in 2001 alone, of the 43,158 new AIDS cases reported, African Americans accounted for 49 percent, Hispanics 19 percent and Asian Americans, less than 1 percent, while whites accounts for 31 percent.



The CDC estimates that approximately 40,000 new HIV infections occur each year in the United States, about 70 percent among men and 30 percent among women. Of these newly infected people, half are younger than 25 years of age, and of the newly infected men, approximately 50 percent are African Americans, 30 percent are white, 20 percent are Hispanics, while a small percentage are members of other racial/ethnic groups. The estimated number of new *pediatric* AIDS cases (cases among individuals younger than age 13) in the United States fell by 89.4 percent from 954 in 1992 to 101 in 2001, according to CDC's HIV/AIDS Statistics, December 2002.

As is true nationwide, minorities in Nebraska are over-represented among persons who have HIV or AIDS. Although minorities make up only about 12.7 percent of the population of the state, 31 percent of the cumulative AIDS cases through 2002 occurred among minority Nebraskans. In 2002 alone, of the 4,372 new AIDS cases reported, African Americans

accounted for 40 percent, Hispanics 10 percent and Asian Americans, less than 4 percent, while whites accounts for 47 percent.

In Nebraska, one-year trends by race or ethnicity are difficult to establish because of the small number of cases reported each year. Thus, average yearly rates for two five-year periods will be compared instead. For white Nebraskans, the average rate of new HIV and AIDS cases decreased from 6.3 to 4.5 cases per 100,000. Incidence rates of new HIV and AIDS cases rose for all four racial and ethnic minority groups in the state for 1998-2002 versus 1993-1997 (*Figure 49*).

Among African Americans, the average rate of new HIV and AIDS cases in 1998-2002 was 50.5, up 25 percent from the previous five-year period. The HIV/AIDS rate for African Americans is 11.2 times higher than the rate for whites in Nebraska (*Table 33*).

For Hispanic Americans, the average HIV/AIDS incidence rate increased by 33.3 percent from 15.9 in 1993-1997 to 21.2 cases diagnosed per 100,000 population in 1998-2002. During this five-year period, Hispanic Nebraskans were 4.7 times as likely as whites to be diagnosed with AIDS. Rates for Native Americans and Asian Americans were 24.2 and 6.2 per 100,000 population, compared with the state's white rate of 4.5 per 100,000 population (*Table 33*).

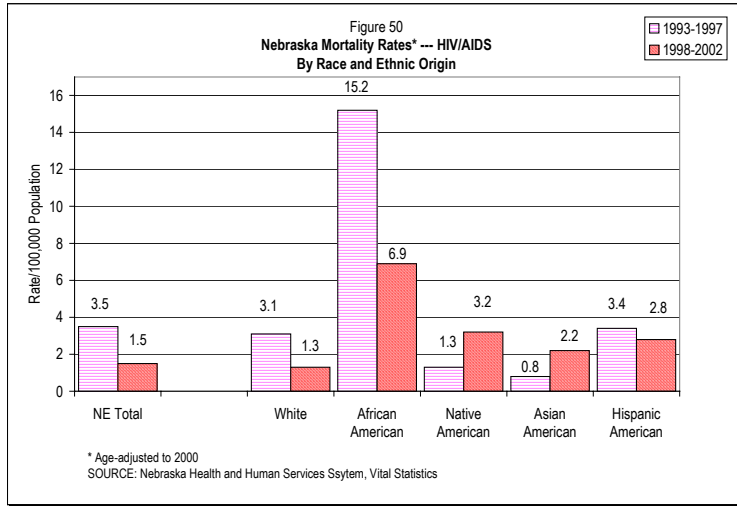
MORTALITY RATES

The number of deaths due to AIDS has declined nationally with 15,603 deaths occurring in 2001 and 16,672 in 2000. In Nebraska, deaths due to this disease decreased from 61 in 1996 to 33 in 2001, according to the Nebraska Vital Statistics Report. Currently, AIDS has moved out of the top 15 causes of death for the overall population in the nation and the state.

Table 33
HIV/AIDS
Incidence Rates and Relative Risk of Disease
For Nebraska Racial and Ethnic Minority Populations

Category	1993-1997		1998-2002	
HIV/AIDS	Incidence Rate Per 100,000 Population	Relative Risk	Incidence Rate Per 100,000 Population	Relative Risk
NE Total	8.0		7.5	
White	6.3		4.5	
African American	40.2	6.4	50.5	11.2
Native American	14.8	2.4	24.2	5.4
Asian American	1.9	0.3	6.2	1.4
Hispanic American	15.9	2.5	21.2	4.7
SOURCE: Nebraska Health and Human Services System, HIV/AIDS Surveillance Program				

For whites, the age-adjusted mortality rate for AIDS declined from the previous five years to 1.3 deaths per 100,000 population for 1998-2002 (*Figure 50, Table 34*).



For African Americans, the 1998-2002 rate (6.9) is 5.3 times the white rate, though, a decrease of more than 54 percent from the rate of 15.2 for 1993-1997. For African American males in Nebraska, the current death rate due to HIV/AIDS is 5.5 times the rate for white males. The mortality rate for Hispanic Nebraskans (2.8) indicates a slight decline of 17.6 percent from the rate of 3.4 for 1993-1997, according to Nebraska's Vital Statistics Report, 1998-2002. Hispanic males are 1.9 times more likely to die of HIV/AIDS than whites (*Table 34*).

Table 34
For HIV/AIDS
Mortality Rates and Relative Risk of Mortality
For Nebraska Racial and Ethnic Minority Populations

Category	1993-1997					1998-2002				
	Number of Deaths	Age-Adjusted* Mortality Rate per 100,000 Population				Number of Deaths	Age-Adjusted* Mortality Rate per 100,000 Population			
			Total	Males	Females			Total	Males	Females
HIV/AIDS										
Nebraska Total	277	3.3				123	1.5			
White	230	3.1	1.0	1.0	1.0	98	1.3	1.0	1.0	1.0
African American	45	15.2	4.9	4.5	11.2	21	6.9	5.3	5.5	**
Native American	1	1.3	0.4	**	**	2	3.2	2.5	**	**
Asian American	1	0.8	0.3	**	**	2	2.2	1.7	**	**
Hispanic American	9	3.4	1.1	1.1	**	10	2.8	2.2	1.9	**

**Number of deaths less than 5

* Age-adjusted to 2000.

SOURCE: Nebraska Health and Human Services System, Vital Statistics data, 1993-1997 and 1998-2002.

YEARS OF POTENTIAL LIFE LOST (YPLL) DUE TO AIDS

Altogether, deaths from AIDS in Nebraska from 1998 through 2002 accounted for an estimated 298.3 years of potential life lost annually among racial and ethnic minority residents of the state (*Table 35*). This number was 0.6 times the YPLL average for AIDS for 1993-1997 (540 years).

YPLL rates have increased for each racial and ethnic group in Nebraska, except for African Americans, although they still lost 4.7 times as many years of potential life per person due to HIV/AIDS as whites in the state in 1998-2002. Native Americans lost 2.5 times as many years of potential life per person as whites in Nebraska, while Hispanics lost 1.9 as many years of potential life per person.

Table 35
Years of Potential Life Lost-HIV/AIDS
Based on 75 Productive Years of Life
For Nebraska Racial and Ethnic Minority Populations

Category	1993-1997			1998-2002		
	# of Total YPLL	Age-Adjusted Rate/100,000	Minority-to-White Ratio*	# of Total YPLL	Age-Adjusted Rate/100,000	Minority-to-White Ratio*
HIV/AIDS NE Total	10,415	129.8		4,221	51.4	
White	8,606	114.2		3,384	45.9	
African American	1,718	551.3	4.8	706	216.7	4.7
Native American	46	57.7	0.5	71	113.4	2.5
Asian American	46	35.1	0.3	61	66.4	1.4
Hispanic American	350	129.3	1.1	355	86.6	1.9
Average/Year (Minorities)	540			298.3		
*Minority Age-Adjusted YPLL Rate/100,000 divided by White Age-Adjusted YPLL Rate/100,000. SOURCE: Nebraska Health and Human Services System, Vital Statistics.						

RISK FACTORS FOR AIDS/HIV INFECTION

Transmission of the human immunodeficiency virus occurs primarily in three ways: sexual contact, intravenous drug use, and perinatal contact with an infected mother. (The screening of donated blood since 1985 for HIV antibodies has nearly eliminated blood transfusions as a risk for acquiring AIDS).

In 1996-2000, 79.4 percent of 403 total AIDS cases occurred among men. Men who have sex with men (MSM) represented 59 percent of all 320 men reported with AIDS. In addition, increasing numbers of women, children, adolescents and injectable drug users are being infected. The fastest-growing means of HIV transmission, especially among women, is heterosexual contact. Of the 403 total cases, 20.6 percent or 83 occurred among Nebraska women, according to the Nebraska HIV/AIDS Surveillance Report, 2002.

In Nebraska, based on cumulative reported cases of AIDS through 2002, the majority of cases occurred among men who have sex with men (54 percent). Ten percent of cases were reported for each of the following categories: injecting drug use; heterosexual contacts, and risk not identified, (RNI), while nine percent of the cases occurred among men who have sex with men and use injectable drugs as well.

HIGH RISK SEXUAL BEHAVIORS

Number of Sexual Partners: The risk of HIV infection is known to increase with the number of sexual partners. Abstinence or sexual intercourse with one mutually faithful uninfected partner is the only totally effective prevention strategy against HIV infection.

Anal Intercourse: The concentration of AIDS cases among men who had sex with other men is due in large part to the practice of anal intercourse. Anal intercourse can cause minor traumatic disruption of the rectal mucosa, which facilitates transmission of the virus. However, it is important to note that anal intercourse is also practiced by some heterosexual couples.

Unprotected Intercourse: HIV is most commonly transmitted through unprotected sexual intercourse. The use of condoms during sexual intercourse can reduce the risk of HIV infections. However, even with the proper use of condoms, elimination of the risk can not be assured.

Adolescent Intercourse: As noted elsewhere in this report, the incidence of sexually transmitted diseases among adolescents is especially high. In addition, the most common method of birth control used by young women, the oral contraceptive pill, does not protect against the spread of HIV. An increase in the percentage of adolescents who abstain from intercourse would help to reduce the spread of HIV and other STDs.

Substance Abuse: Intravenous drug users account for nearly one-fifth of the cumulative AIDS cases in the United States. The transmission of AIDS within this group is the result of sharing needles and syringes used for injection of drugs.

Perinatal Contact: In the 1990s, before perinatal preventive treatments were available, 1,000 to 2,000 babies were born with HIV each year in the United States. However, In 1994 and 1995, the Public Health Service recommended routinely counseling and voluntarily testing pregnant women for HIV and offering zidovudine (AZT) to infected women during pregnancy and delivery and for the infant after birth. As a result, between 1993 and 2002, the number of babies diagnosed with AIDS in the United States has fallen by 89.4 percent – from 954 in 1992 to 101 in 2001 in the U.S. In Nebraska, pediatric AIDS cases have declined to less than 2 per year.

PROGRESS TOWARD OBJECTIVES

It is important to note that while these national data provide a fairly accurate view of the HIV/AIDS trends, these do not include data from persons tested anonymously. About two-

thirds of people living with HIV infections are already tested and are aware of their status. Based on a decreasing trend, the Nebraska 2010 objective for number of new diagnosed cases of AIDS for African Americans was set at no more than the rate of 1.0 new cases/100,000 population for the year (*Table 36*). This objective was not achieved based on the average annual incidence for 1998-2002 of 173 cases, at the rate of 50.5 cases per 100,000.

Table 36
HIV/AIDS
Baseline, Current Data and Year 2010 Objectives
For U.S. and Nebraska Racial and Ethnic Minority Populations

Indicator and Target Groups	Nebraska Baseline (1993- 1997)	Nebraska Current Rate (1998- 2002)	NE % Change - Current vs. Baseline Rates	NE Year 2010 Objective	U.S. Data Year 2000	U.S. Current Rate	U.S. Year 2010 Objective
Annual Incidence of Diagnosed HIV/AIDS** Cases							
African American (# of Cases) Rate /100,000 Population aged 13+	133 (Cases)* 40.2	173 (Cases) 50.5	25.6	1.0	2000	58.1	1.0
Hispanic Americans (# of Cases) Rate /100,000 Population aged 13+	54 (Cases)* 15.9	100 (Cases) 21.2	33.3	1.0	2000	22.5	1.0
Native American (# of Cases) Rate /100,000 Population aged 13+	11 (Cases)* 14.8	18 (Cases) 24.2	63.5	1.0	2000	9.8	1.0
Asian American (# of Cases) Rate /100,000 Population aged 13+	2 (Cases)* 1.9	7 (Cases) 6.2	226.3	1.0	2000	3.4	1.0
* HIV Numbers are incomplete, since HIV reporting did not begin until September 1995. ** Includes both HIV and AIDS Cases: Rates, Age-adjusted to 2000 SOURCE: Nebraska Health and Human Services System, HIV/AIDS Surveillance Program, and Nebraska 2010 Health Goals and Objectives.							

For Hispanic Americans, the target number was set at no more than the rate 1.00 per 100,000 population of diagnosed new cases of AIDS in the year 2010. Based on 1998-2002 incidence, the incidence rate was 24.2. The year 2010 objective for AIDS incidence for this population group was not met.

IMMUNIZATION

Neither the 1992 nor the 1996 Minority Health Status Reports resulted in any information concerning immunization status in Nebraska, although immunizations were discussed in the 1996 "Nebraska Year 2000 Health Goals and Objectives" report. Detailed data on

immunization levels were only available through retrospective studies of immunization records of school-aged children or through immunization clinic records. In this report, current Nebraska data are available for some population groups from a national survey conducted by CDC.

OVERVIEW OF HEALTH IMPACT

According to the Nebraska Health and Human Services System, “Healthy People 2010 Objectives #14-22a through #14-22f seek to increase to 90 percent the proportion of children aged 19 through 35 months who received the appropriate number of doses of six universally recommended vaccines. Objective #14-24 sets a target of at least 80 percent of children aged 19 through 35 months receiving the 4:3:1:3:3 series of recommended vaccines (Nebraska 2010 Health Goals and Objectives, 2002).

Currently the immunization rate for this age group in the U.S. is 75 percent and Nebraska’s immunization rate is 82 percent. To be minimally immunized, a child aged 19 through 35 months will have completed a series of 4 doses of diphtheria/tetanus/pertussis, 3 doses of polio vaccine, and 1 dose of measles/mumps/rubella vaccine. About 25 percent of America’s toddlers (almost 1.4 million 2 year olds) lack one or more doses of these series. The Nebraska Immunization Program provides funding, vaccines and training support to immunization clinics and private providers throughout the state for infants to freshman college students. It is the goal of the Immunization Program “to enable communities to provide, on a local level, a preventive health program designed to meet each area’s individual needs while maintaining quality of service,”(Nebraska Health and Human Services System 2002, p.1).

VACCINE-PREVENTABLE DISEASES AND RISK FACTORS

The following vaccine-preventable diseases and risk factors listed and discussed below were taken from the Nebraska 2010 Health Goals and Objectives.

Polio is a disease of the lymphatic and nervous systems, usually transmitted through contact with an infected person. Symptoms associated with polio include headaches, fever, stomachaches, back, leg, neck stiffness, sore throat, and nausea. Before Polio vaccine was developed, 13,000 to 20,000 cases of paralytic polio, mostly among children, were reported each year in the U.S. With the advent of the vaccine and polio immunization programs, paralytic polio has been eliminated in the U.S.

Other vaccine-preventable diseases include **Haemophilus influenza type b (hib Meningitis)**. Before Hib vaccine became available in 1985, there were approximately 20,000 invasive Hib cases annually in the United States, primarily among children less than 5 years of age. Hib meningitis was the cause of 600 child deaths each year and left many surviving children with deafness, seizures or mental retardation. Since the conjugate Hib vaccine was introduced in 1990 for children, incidence of Hib disease has declined by 99 percent. Fewer than 10 deaths per year were attributed to Hib disease nationwide in 1994-1998.

Whooping cough (or pertussis) cases have been on the rise since 1980; however, the number of cases is still much lower than levels seen before pertussis vaccine was available. In 2001, 5,396 cases were reported. In 1997-2000, 62 fatal cases were reported nationally with 56 of those occurring in children less than 6 months of age. During the 1970s and 1980s there were concerns about the adverse reactions to pertussis immunizations. However, the newer vaccine (acellular or DTap), available since 1991, is associated with fewer adverse reactions.

Rubella or German Measles is a mild disease in children and adults, but has a dangerous effect on infants born to mothers who contract the virus during the first trimester of pregnancy. Up to 90 percent of these children develop congenital rubella syndrome (CRS), resulting in deafness, blindness, mental retardation, heart defects, or cataracts. Incidence of CRS has declined dramatically since rubella vaccine began to be used widely. Currently, an average of less than 200 cases of rubella are reported annually in the U.S, primarily among Hispanic young adults who were born in areas where rubella vaccine is not routinely given.

Measles. Before the measles vaccine was available in 1963, there were 3 to 4 million estimated measles cases in the U.S. each year with an average of 450 measles-related deaths reported annually. Since use of the measles vaccine has become widespread, the number of cases of this disease has declined by more than 99 percent. In 2001, there were just over 100 cases of measles.

Varicella (Chickenpox): Chickenpox has always been present in the community and is highly contagious. Before the licensing of chicken pox vaccine in 1995, almost all persons in the U.S. had suffered from chicken pox by adulthood. Chickenpox was responsible for an estimated 4 million cases, 11,000 hospitalizations, and 100 deaths each year, (CDC, 1999). Compared with 1995, the number of chicken pox cases declined by 71 percent to 84 percent in 2000.

Other vaccine-preventable diseases include **Hepatitis B.** Currently there are about 1.25 million people who are infected with this virus. Of these about 4,000 to 5,000 people die from related liver disease each year. Of the infants and children who become infected with life-long hepatitis B virus, one-fourth would be expected to die of related liver disease as adults. Hepatitis B is spread through contact with the blood of an infected person or by having sex with an infected person.

Mumps had a nationwide incidence of about 666 cases in 1998. Mumps is a mild viral disease, which may develop into mild meningitis and may result in hearing loss. Inflammation of the testicles or ovaries may also occur.

Tetanus or Lock-Jaw is another vaccine-preventable bacterial disease. It is severe and often fatal. The bacteria that cause tetanus are mainly borne by soil dust and animal and mainly affect adults. In 1998, there were 41 cases of tetanus reported nationwide.

Diphtheria is a very serious and sometime fatal disease caused by poisons secreted by the bacteria. Diphtheria frequently causes heart attacks and nerve problems. Death rate ranges from 5 to 20 percent among the very young and elderly people. There were no reported cases of diphtheria in the United States in 1998.

Influenza. Influenza is a highly infectious viral disease. Immunization against influenza is recommended annually for the elderly (age 65 and older) and for persons who have risk factors such as heart problems, lung diseases, metabolic diseases such as diabetes, anemia, or other blood disorders, or kidney disease. Twelve Nebraska residents died of influenza during 2002 at the rate of 0.6 deaths per 100,000 population.

Pneumonia. A Vaccine is available to prevent pneumococcal pneumonia (a type of bacterial disease), which can be a serious disease resulting in hospitalization and death. As with influenza, immunization is advisable for persons aged 65 and older and for those with long-term health problems such as heart disease, alcoholism, lung disease, diabetes or cirrhosis of the liver. Pneumococcal vaccine is usually a once-in-a-lifetime shot. There were 402 deaths from pneumonia in 2002 in Nebraska, the rate was 20.2 deaths per 100,000.

IMMUNIZATION LEVELS IN CHILDREN

In 2001, 77.2 percent of U.S. children between 19 and 35 months of age received the recommended number of the basic universal 4:3:1:3 immunization series (4 or more doses of diphtheria – tetanus – pertussis [DTP] vaccine, 3 or more doses of poliovirus vaccines, 1 or more doses of any measles – containing vaccine (MCV), and 3 or more doses of Haemophilus influenzae type b [Hib] vaccine), according to CDC's 2001 National Immunization Survey.

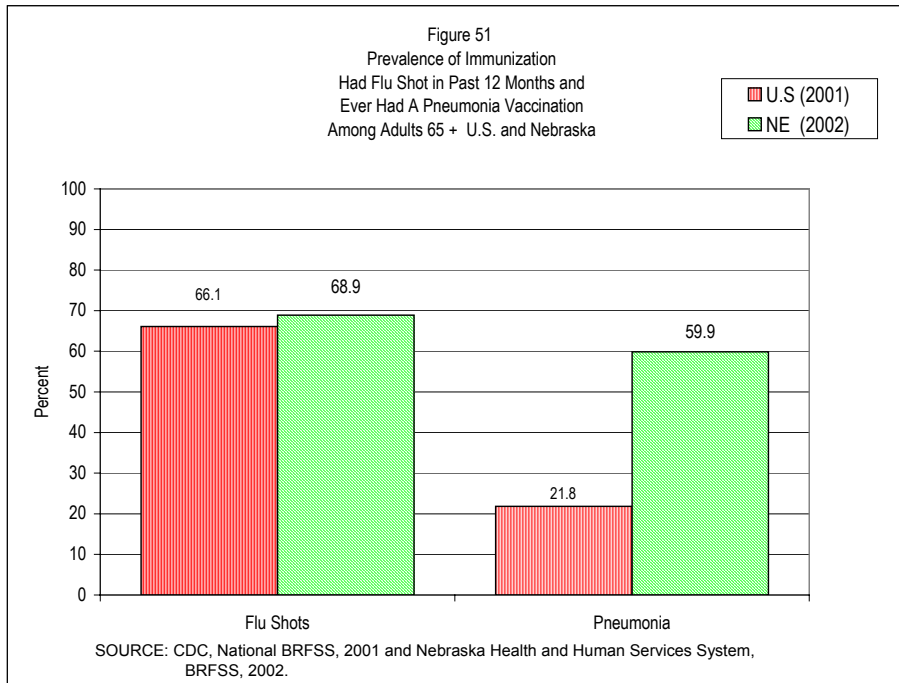
In Nebraska, 80.4 percent of the children between the ages of 19 and 35 months had received the above basic vaccinations during 2001. For the combined series, 4:3:1:3:3, Nebraska's rate of 78.9 percent was higher than the nation's 73.7 percent. Coverage was slightly higher for the 4:3:1 series which contains all of the above except the Hib vaccine (78.6 percent nationwide and 81.5 percent in Nebraska). Coverage has improved since 1995 when 75 percent of American children in this age group had received the 4:3:1 series. In Nebraska 72 percent of these children had these vaccinations in 1995. Among school-aged children in Nebraska treated, immunization rates for individual vaccines all exceeded 97 percent in 1999.

ADULT IMMUNIZATIONS FOR INFLUENZA AND PNEUMONIA (65 +)

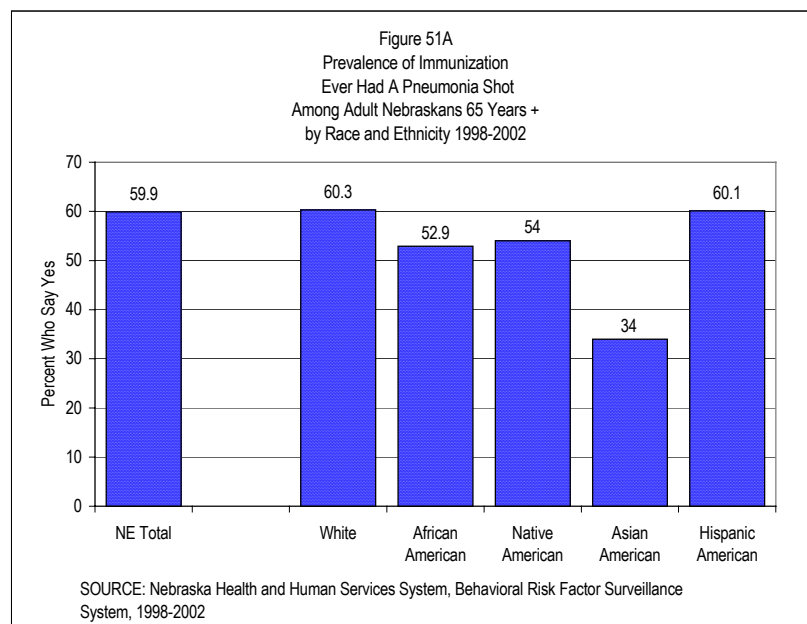
Pneumonia and influenza together make up the sixth leading cause of death in the U.S., according to the Nebraska 2010 Health Goals and Objectives. Pneumonia was the cause of 1.3 million hospitalizations and 63,548 deaths in 2000. Influenza was the cause of 1,765 deaths in 2000 and the number of cases reported annually was 95 million in 1996, according to the NCHS.

Flu shots or influenza vaccinations are known to prevent up to 70 percent of hospitalizations as well as 85 percent of deaths from influenza-related pneumonia. There has been an increase in the proportion of Nebraska's elderly population (age 65 years and older) since 1993 when only 33 percent had reported having had this vaccination in the past 12 months. Nationwide, in 2001, 66.1 percent of elderly U.S. residents had received a vaccination for flu or influenza in the last 12 months. In Nebraska, in 2002, slightly more than two-third

of adults 65 years of age and older (68.9 percent), had received a vaccination for flu or influenza in the past year. Furthermore, during 1998-2002, slightly over two-thirds (68.9 percent) of adult Nebraskans 65 years and older had received a vaccination for flu or influenza in the past year, compared to 61.2 percent in the previous five-year period, 1993-1997 (*Figures 51 and 51A*).



Based on the 1998-2002 BRFSS, the proportion of Nebraskans in this age group who reported at least one pneumonia vaccination increased by 58.0 percent from 37.9 percent in 1993-1997. This represents 333 percent increase since 1993 when the rate was only 13.6 percent. Slightly more than 60 percent of Hispanic Americans, 54.0 percent of Native



Americans, 52.9 percent of African Americans, and 34.0 percent of Asian Americans reported they had received a vaccination for pneumonia in the last 12 months compared to 60.3 percent of whites. Sixty percent of Hispanics 65 years and older reported they had received a vaccination for pneumonia (*Figure 51A*).

IMMUNIZATION BARRIERS

There are several barriers to childhood and adult immunization. *The Journal of Family Practice – Clinical Review of 2001, Vol. 50, No.10* summarized the barriers to immunization, some of which are expanded thus: “Barriers to immunization include fear of adverse reactions, fragmented care, and missed opportunities to vaccinate, concerns about safety and efficacy of vaccines,”(p.1). There is the fear and concern of parents about the safety of vaccines, perhaps due to some unfounded and unbalanced media reports concerning the dangers of vaccines.

Other commonly cited barriers include “misconceptions about the prevalence or severity of vaccine-preventable diseases, fragmentation of care, vaccine costs, increasing schedule complexity and expanding target populations for vaccination, missed attendance at office or clinic visits, inadequate vaccine supply or vaccine-delivery system, and lack of awareness of immunization rates in provider’s practice and region,” the above source stated. The complexity of the recommended immunization schedule may make it difficult and time consuming for parents to have their children immunized. At least five clinic visits before age two are recommended.

Furthermore, the economic cost involved, especially to poor people who must pay out-of-pocket where no sort of insurance coverage exists, makes it difficult for this group to obtain adequate vaccination for their children. However, the Nebraska Children’s Health Insurance Program (CHIP), which provides coverage for uninsured low-income children who are not otherwise eligible for Medicaid, makes vaccinations available to many low-income children.

These barriers are also applicable to adults who need to be vaccinated. Adults may not be aware of the dangers posed by lack of vaccination. Lack of insurance coverage is another factor preventing adults from receiving needed immunizations. However, as of 1993, changes in Medicare have made it possible for adults in this program to receive reimbursement for flu and pneumonia vaccinations. Another factor having an impact on immunization levels is the presence of religious or cultural barriers prohibiting vaccinations.

INCIDENCE OF VACCINE-PREVENTABLE DISEASES

The incidence of many vaccine-preventable diseases is low in Nebraska. In 2002, there were no reported cases of diphtheria, tetanus, polio, measles, rubella, or Hib, (*Table 37*).

In the last ten years, there were no reported cases of diphtheria and polio. Nonetheless, 103 cases of rubella were reported in 1999 as a result of an outbreak among Hispanic Americans in Douglas County. However, thirteen cases of pertussis (whooping cough) were reported in 1999, with a steady incidence since 1990. During 1989 and 1990, there were two outbreaks of measles with a total of 251 cases and no cases reported since 1995.

PROGRESS TOWARD OBJECTIVES

Overall, in 2001 nationwide, there was a slight increase in the immunization rates with significant increases for chicken pox (from 57.5 percent in 1999 to 76.3 percent in 2001), while a slight decrease was experienced in the Hepatitis B immunization rates, according to CDC. According to the 2001 U.S. National Immunization Survey data, Nebraska vaccination coverage for children 19-35 months of age exceeded the national coverage rates although generally, differences were not statistically significant.

Nebraska's coverage ranged from a low of 68.1 percent for the entire universally recommended standard series of 4:3:1:3:3 to 80.4 percent for the 4:3:1:3 series, to a high of 81.5 percent for 3 or more DTP vaccinations (*Table 37A*). The Nebraska Year 2010 objective was to increase to 80 percent the proportion of children aged 19-35 months who received the 4:3:1:3:3 series. In 2001, 68.1 percent had this complete series, therefore the Year 2010 objective has not been achieved.

Nationally, Hispanic and Asian Americans and white non-Hispanics had better coverage when the three immunization series are considered (*Table 37A*). African Americans and Native Americans have lower coverage rates than the overall rates nationally, although Native Americans were better off than African Americans. Unfortunately, the sample sizes for African Americans, Native Americans and Asian Americans were too small for any coverage estimations to be made for Nebraska.

For Hispanic Americans, Nebraska estimates were made for two vaccine series and for DTP vaccines. Vaccine coverage estimates for Hispanics in Nebraska were lower than coverage for Hispanics nationwide. However, Nebraska registered a net increase of 18.3 percent in varicella (chickenpox) vaccination rates from 58.4 percent in 1999 to 69.1 percent in 2001. The U.S. made a net gain of 32.7 percent from 57.5 percent in 1999 to 76.3 percent in 2001.

Table 37
Incidence of Vaccine-Preventable Disease
in Nebraska by Year

Category	Number of Cases												
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Vaccine-Preventable Disease													
Diphtheria	0	0	0	0	0	0	0	0	0	0	0	0	0
Tetanus	0	0	0	2	0	0	0	0	0	0	0	0	0
Pertussis	7	10	14	14	13	14	15	15	24	14	32	11	13
Polio	0	0	0	0	0	0	0	0	0	0	0	0	0
Measles	93	1	0	0	1	0	0	0	0	0	0	0	0
Mumps	0	0	1	2	2	4	0	0	0	0	2	1	2
Rubella	1	0	0	0	0	0	0	0	0	103	1	0	0
Congenital Rubella Syndrome	0	0	0	0	0	0	0	0	0	0	0	0	0
Hepatitis B	31	38	44	23	29	39	36	26	24	22	43	30	29
Hib	19	18	9	7	4	3	0	0	0	0	0	1	0
SOURCE: Nebraska Health and Human Services System; Nebraska 2010 Health Goals and Objectives													

TABLE 37 A

ESTIMATED VACCINE COVERAGE AMONG CHILDREN 19 TO 35 MONTHS OF AGE
INDIVIDUAL VACCINES AND SELECTED VACCINATION SERIES
2001 National Immunization Survey

	Percentage of Children Aged 19 to 35 Months Who Have Received Vaccination									Native American U.S.	Asian American U.S.
	Total Population U.S.	Nebraska	White Non- Hispanic U.S.	Nebraska	Black Non- Hispanic U.S.	Nebraska	Hispanic U.S.	Nebraska			
4:3:1 Series*	78.6	81.5	79.9	73.0	72.8	NA	79.0	77.3	75.8	79.6	
4:3:1:3 Series*	77.2	80.4	78.8	83.1	71.4	NA	77.0	NA	75.5	76.9	
4:3:1:3:3 Series*	73.7	68.1	75.2	69.7	67.1	NA	74.1	68.6	72.7	74.1	
3+ DTP (diphtheria - tetanus - pertussis)	94.3	94.2	94.6	94.8	91.8	NA	94.7	91.8	92.7	95.8	
4+ DTP (diphtheria - tetanus - pertussis)	82.1	85.4	83.5	87.4	76.3	NA	82.5	NA	77.2	84.0	
3+ Poliovirus vaccine	89.4	88.9	90.9	N/A	N/A	NA	N/A	N/A	N/A	N/A	
1+ MMR (measles - mumps - rubella)	91.4	90.9	91.7	93.6	89.1	NA	N/A	NA	N/A	N/A	
3+ Hib (<i>Haemophilus influenzae</i> type b)	93.0	92.0	94.2	95.0	89.5	NA	N/A	N/A	N/A	N/A	
3+ HepB (hepatitis B)	88.9	91.2	89.6	93.8	84.9	NA	89.8	NA	85.7	89.6	
1+ Varicella (chickenpox) at or after first birthday	76.3	69.1	74.7	69.8	75.3	NA	80.3	NA	69.4	81.8	
*4:3:1 Series = 4 or more doses of DTP (diphtheria and tetanus toxoids and pertussis vaccine), 3 or more doses of poliovirus vaccine, and 1 or more doses of any measles-containing vaccine (MCV)											
*4:3:1:3 Series = same as 4:3:1 Series above + 3 or more doses of <i>Haemophilus influenzae</i> type b (Hib) vaccine											
*4:3:1:3:3 Series = same as 4:3:1:3 Series above + 3 or more doses of hepatitis B vaccine											
SOURCE: Centers for Disease Control and Prevention, National Immunization Survey, 2001.											

ASTHMA

OVERVIEW OF HEALTH IMPACT

According to the Nebraska 2010 Health Goals and Objectives, asthma is a serious and growing public health problem. This document defines asthma as a chronic inflammatory disease of the airways characterized by recurrent respiratory symptoms such as wheezing, breathlessness, chest tightness, and coughing. Data from CDC and the NCHS revealed that in 2000 in the United States, there were 4,487 deaths attributed to asthma (rate of 1.6 deaths per 100,000 population) in the U.S. This included 223 children, aged 0-17 years (at the rate of 0.3 deaths per 100,000 population) and 4,264 adults aged 18 years and older (2.1 deaths per 100,000 population). Furthermore, approximately 17.7 million adults, aged 18 and older reported having asthma in 1998. More females (10.5 million) than males (7.2 million) reported having ever been told they have asthma. In 2000, asthma was the primary reason for 9.3 million visits to office-based physicians in the United States.

In Nebraska, asthma was the primary cause of the deaths of 201 Nebraskans between 1998 and 2002. In 1998, there were a total of 3,154 asthma emergency room visits at the rate of 20.5 per 10,000 population (rates age-adjusted to the 1970 U.S. standard population). Of this number, 1,790, or 56.8 percent of ER visits were made by females while, 1,364 or 43.2 percent were made by males, (*Nebraska Epidemiology Report: Asthma in Nebraska, 1987-1998*, March 2001).

HEALTHY PEOPLE 2010 OBJECTIVES

Overall, for all racial and ethnic groups in Nebraska, the Nebraska Healthy People 2010 objective #24-1 is to reduce death rates due to asthma to no more than:

- 1.4 deaths per million for children under age five years
- 2.4 deaths per million for children 5 to 14 years
- 3.8 deaths per million for adolescents and adults aged 15 to 34 years
- 10.6 deaths per million for adults aged 35 to 64 years
- 112.2 deaths per million for adults aged 65 years and older.

RISK FACTORS

Asthma risk factors, prevention and wellness tips indicate that any person can get asthma, but usually first diagnosed in young people. Some risk factors for asthma are inherent (something you are born with) while others are external (factors that you are exposed to). Differences in risk factors are dependent on whether one is a child or an adult. Although inherent risk factors are uncontrollable, external factors can be controlled to reduce risk or seriousness of asthma in both adults and children. In other words, risk factors for asthma genetic predisposition and environmental exposures do contribute to the development of asthma in individuals or cause a person with asthma to have an attack. Biomedical Laboratories revealed that the CDC and the National Center for Environmental Health (NCEH) states that if a person has a parent with asthma, he or she is three to six times as

likely to develop asthma as someone who does not have a parent with asthma, (Biomedical Laboratories, 2003).

INHERENT RISK FACTORS FOR CHILDREN AND ADULTS

- **Family and Medical History:** If an individual has one or both parents who have asthma, chances are that the child will develop the condition, which then can be carried on into adult life. Asthma conditions are more likely to be developed in children if the mother has it than when the father is asthmatic.
- **Gender:** In childhood, boys are more often predisposed to develop asthma than girls. In addition, birthweight and age of the child can contribute to the development of asthma.
- **Allergies:** Children who have allergies are more likely to develop asthma.

EXTERNAL/ENVIRONMENTAL RISK FACTORS FOR CHILDREN AND ADULTS

Indoor Allergens:

- House dust and mites
- Animal dander and allergens
- Cockroach allergens
- Molds
- Environmental tobacco smoke (indoors)
- Scented products such as hair spray, cosmetics and cleaning products
- Strong odors from fresh paint, new carpets, and cooking.

Outdoor Allergens:

- Dust
- Molds
- Pollens from grass and trees and other plants
- Environmental tobacco smoke (outdoors).

Occupational Irritants and Sensitizers:

- Exposure to occupational irritants that may include fumes, gas exhaust, paint odors, dust, latex products, and metals.

Air Pollutants:

- Indoor and outdoor pollutants
- Automobile/truck fumes
- Chemicals such as pesticides and lawn treatments.

Other Irritants

- Respiratory infection
- Exercise
- Strong emotional responses
- Cold or hot weather temperatures.

TIPS TO CONTROL ASTHMA

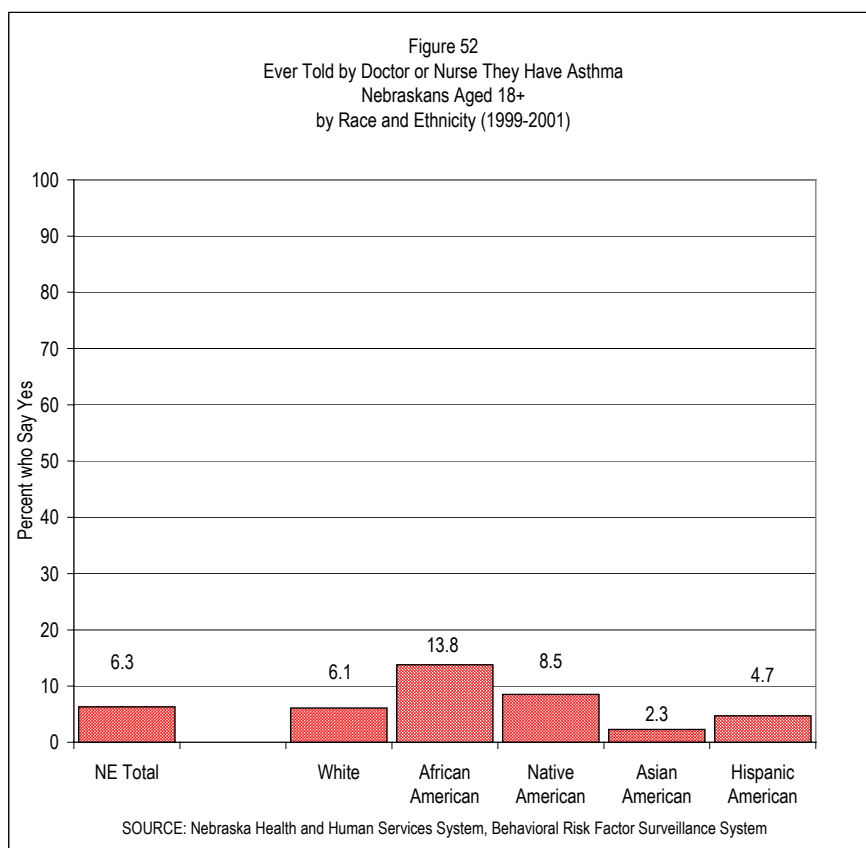
1. Consult a physician on a regular basis. Insure that the physician is following current treatment guidelines (National, Heart, Lung and Blood Institute Asthma Treatment Guidelines).
2. Follow an individualized asthma management plan.
3. Use prescribed medications appropriately.
4. Control exposure to triggers.
5. Monitor response to treatment.

PREVALENCE OF ASTHMA

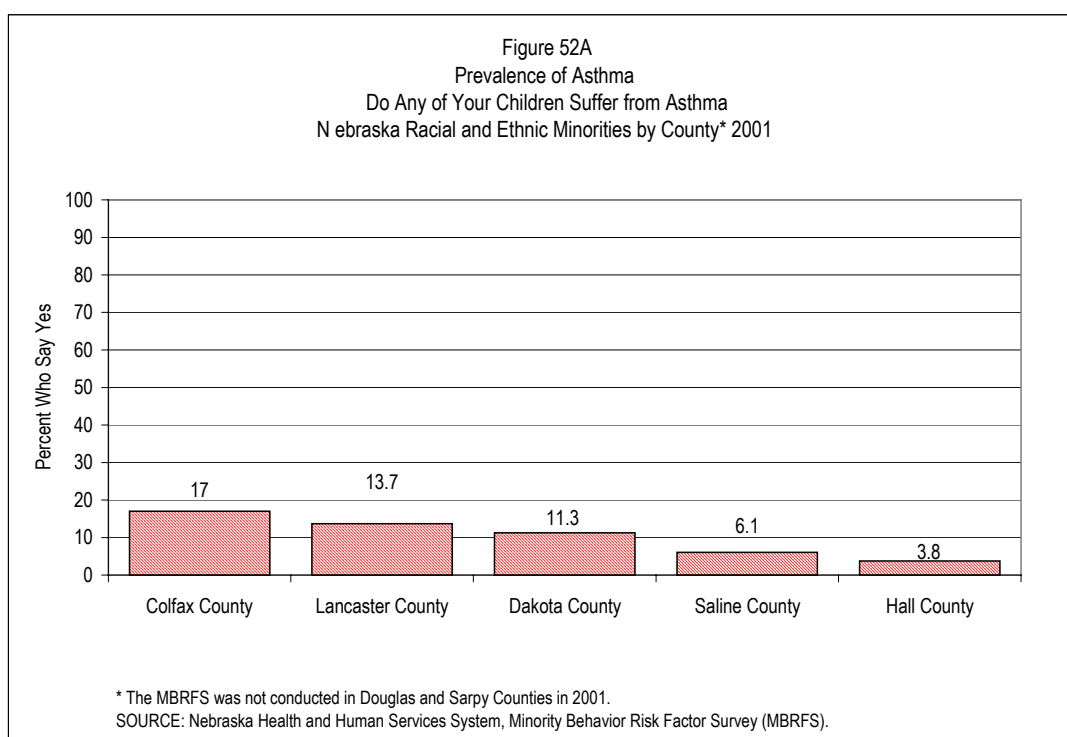
Generally, the prevalence of asthma is slightly higher for members of racial and ethnic minority groups than for whites, as well as higher in females than in males, according to the NCHS. For instance in 2001, current asthma prevalence was about 10 percent higher among African Americans than whites and about 40 percent higher compared to Hispanics. Females were more likely (30 percent) than males to ever have been diagnosed with asthma. This is similar to the 2000 trend described in the overview of health impact above.

Data from the 2001 National Health Interview Survey (NHIS) suggests that national current asthma prevalence rate (estimated population of those who reported having asthma at the time of the interview) was 73 people per 1,000 population or 20.3 million people. Furthermore, 31.3 million people (114 people per 1,000) had ever been diagnosed with asthma during their lifetime. Among adults 18 years and older, 109 per 1,000 had a lifetime asthma diagnosis (22.2 million people) compared to 126 per 1,000 children 0-17 years (9.2 million).

In Nebraska, an estimated 112,100 persons have asthma. The Nebraska 2000 BRFSS estimated a statewide self-reported prevalence rate of approximately 6.6 percent of adults aged 18 years and older. In 2000, there were asthma self-reported prevalence rates of 8.4 percent for females ages 18 years and older and 4.2 percent for men in this age category. During 1999-2001, the age-adjusted asthma prevalence rate among African Americans (13.8 per 100,000 population) was more than double when compared to whites (6.1). Asthma prevalence was also higher among Native Americans (8.5) when compared to whites. Asian Americans (2.3) and Hispanics (4.7) recorded lower rates when compared to both whites and other minority groups (*Figure 52*).



According to the Minority Behavior Risk Factor Survey, (MBRFS) 2001, when asked the following: “Do any of your children suffer from asthma?”, 17 percent of the households in Colfax County, 13.7 percent in Lancaster County, 11.3 percent in Dakota County and 6.1 percent in Saline County, reported their children suffered from asthma (*Figure. 52A*).



In both Cuming and Hall Counties, where the MBRFS have been conducted, results were mixed. While 3.7 percent of the households in Cuming reported they were not sure that their children had asthma, 96.3 percent reported that their child(ren) do not suffer from asthma. In Hall County, 3.8 percent reported that their children suffered from asthma. However, *A Report to the Community*, from a study on asthma conducted by the Omaha Asthma Alliance in May 2002 indicated that in Douglas and Sarpy Counties the self-reported prevalence of asthma among adults 18 years of age and older averaged 7.1 percent in 1999 and 2000. Other results reported by the researchers include:

- The prevalence of physician diagnosed asthma in elementary school students ranged from 2 to 24 percent;
- The prevalence of physician diagnosed asthma in middle schools ranged from 6 to 24 percent;
- Boys have 1.2 times the risk of having asthma as girls;
- African American children had 1.8 times the risk of having asthma as children of other races;
- 62 percent of African American children and 77 percent of white children reported having a provider;
- 27 percent of African American children, 19 percent of white children, 15 percent of Hispanic children and 7 percent of Native American children had an asthma action plans on file with school, and
- Of the 1,550 children with asthma in the survey, 581 (38 percent) have no asthma medication noted on their school charts.

The Nebraska 2010 Health Goals and Objectives reports that asthma is the most common chronic respiratory disease of childhood worldwide and prevalence among children and adolescents has increased substantially. In the U.S., asthma currently affects about five million children. Thirty to 40 percent of these children have mild to moderate asthma. Over 11 million school days are lost annually in the nation, thus making asthma the leading cause of school absences among children.

EMERGENCY ROOM VISITS FOR ASTHMA

In 2000, nationwide, there were 1.8 million visits to emergency rooms (ER's) at the rate of 67 people per 10,000. There were over 728,000 asthma ER visits for children aged 0-17 years at the rate of 104 per 10,000. Adults 18 years and older visited emergency rooms at the rate of 54 per 10,000. African Americans had an ER visit rate that was 125 percent higher than that for whites, perhaps due to lack of insurance coverage among this group. Females visited the ER for asthma of about 30 percent more frequently than males, according to the NCHS.

According to the HHSS' asthma emergency room (ER) data, in Nebraska there were 23,856 (ER) visits for asthma as the primary diagnosis during 1996-2001, or at an age-adjusted rate of 238.0 visits per 100,000 population. Children aged 0-14 years had over 8,932 ER visits while those aged 15-24 years had 4,402 ER visits. More female (13,367) Nebraskans of all ages made more asthma ER visits than males (10,489) during 1996-2001. When asthma-related emergency visits are considered, a total of 38,675 ER visits were made statewide. There were 13,681 such visits made by those aged 0-14, while those aged 15-24 made 7,093 ER visits

during the same period, 1996-2001. Again, more females (22,275) than males (16,400) made such asthma-related ER visits. In Omaha and Sarpy Counties, there was an average of 1,767 emergency room visits for asthma per year among residents during 1998 and 1999, according to the Omaha Asthma Alliance.

ASTHMA-RELATED HOSPITALIZATIONS

According to the NCHS, nationwide, there were 465,000 asthma hospitalizations in 2000, or 17 hospitalizations per 10,000 population. Children 0-17 years of age recorded 214,000 hospitalizations at a rate of 30 per 10,000 population, while those 0-4 years of age recorded the highest hospitalization rate of 67 per 10,000 population. African Americans, when compared to whites experienced over 2 times the rate of asthma hospitalizations. Females had hospitalization rates of 25 percent higher than males in 2000. In Nebraska, during 1995-2001, there were a total of 9,433 hospitalizations listing asthma as the primary diagnosis. The highest number of hospitalizations occurred in the 0-14 age group (2,736).

When asthma as the primary diagnosis is considered, hospitalization among children 5-14 (1,563) was high, and by far, higher still among children 0-14 (2,736). Those in age brackets 35-44 (1,085), 45-54 (1,051) as well as those aged 65-74 (1,000) recorded high numbers of hospitalization.

When considering asthma not as the primary diagnosis but rather contributing or related to, hospitalization, there were a total of 40,329 such inpatient hospital discharges during 1995-2001. Children ages 0-14 recorded 5,586 asthma-related hospitalizations, while persons 65-74 years of age made a total of 6,126 such hospitalizations.

According to the Omaha Asthma Alliance's study, an average of 503 inpatient discharges per year occurred in Douglas and Sarpy Counties acute care hospitals in 1998 and 1999. The highest number and highest rate of hospital discharges for asthma occurred in the east-northeast, and the east-southeast regions. Hospitalization rates among residents in these three regions were higher than the overall rate for the two counties (8.9), and the rate for the state (7.9). Inpatient discharges for asthma were higher from October through February. The lowest occurred in the summer. Douglas and Sarpy Counties hospitalization rates for asthma, were higher among females (10.3) than males (6.8), the study found.

OFFICE VISITS FOR ASTHMA AMONG MEDICAID ENROLLEES

There were 269,035 unduplicated Medicaid eligibles enrolled in the Nebraska Medicaid program during calendar year 2002. Of this number 9,054 or 33.7 per 1,000 enrolled had persistent* asthma as defined below, by the National Committee for Quality Assurance (NCQA) and Health Plan Employer Data and Information Set (HEDIS). According to HEDIS, enrollees with persistent asthma are those who have any of the following in the year prior to the measurement year:

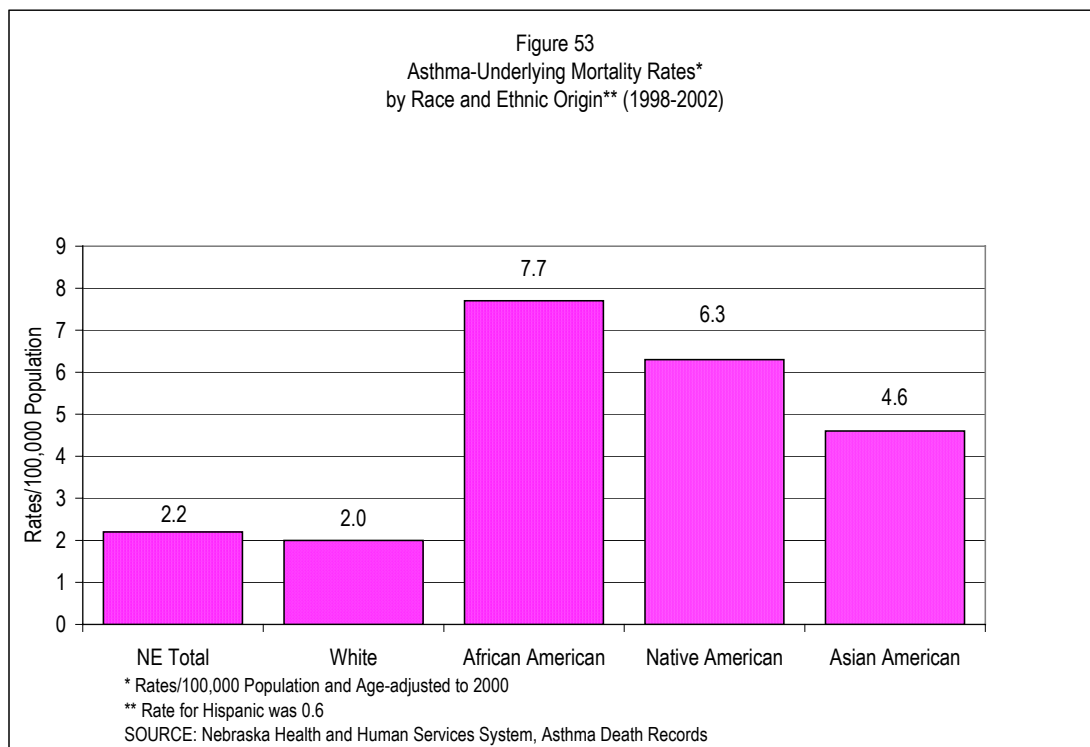
- at least four asthma medication dispensing events* (i.e., an asthma medication was dispensed on four occasions) OR

- at least one Emergency Department (ED) visit based on the visit codes below with asthma (ICD-9 code 493) as the principal diagnosis OR
- at least one hospitalization based on the visit codes below with asthma (ICD-9 codes 493) as the principal diagnosis OR
- at least four outpatient asthma visits based on the visit codes below with asthma (ICD-9 code 493) as one of the listed diagnoses AND at least two asthma medication dispensing events,* (HEDIS 2001, vol. 2).

Of those aged 5-56 years with persistent asthma who were enrolled for the 11 of the 12 months in 2002, 60.3 percent received the appropriate medications. In Douglas and Sarpy Counties, Medicaid patients made an average of 9,205 asthma-related physician office visits per year during 1998 and 1999 at the rate of 161.5 per 1,000 enrollees.

DEATHS DUE TO ASTHMA

In Nebraska, during 1998-2002, 218 people died from asthma at an age-adjusted rate of 2.4 deaths per 100,000 people. Of the total, 195 asthma deaths occurred among whites at the rate of 2.0, while 20 of the deaths were among African Americans at a high rate of 7.7 deaths per 100,000 population. When compared to whites, asthma deaths occurred among Native Americans at the rate of 6.3 and among Asian Americans at the rate of 4.6 deaths per 100,000 population, (*Figure 52*).



When the comparison year period of 1993-1997 is considered, the data revealed that overall, there was a decrease of approximately 28 percent in the number of asthma deaths in Nebraska from 278 asthma deaths during 1993-1997 to 201 in 1998-2002. Among African Americans, the number of asthma deaths fell from 31 in 1993-1997 to 18 during 1998-2002. During the same period the asthma death rate within this group decreased by 17.3 percent from 12.0 deaths per 100,000 population in 1993-1997 to 7.7 deaths per 100,000 population during 1998-2002.

In Douglas and Sarpy Counties, from 1987 through 1999, asthma was the cause of death for 238 resident deaths at an average of 18 deaths per year. Of those, 185 (77.7 percent) were white and 52 (21.8 percent) were African Americans. The asthma death rate in these two counties was consistently higher than both the Nebraska and U.S. rates from 1987 through 1998. Douglas and Sarpy Counties experienced a 27 percent increase in asthma deaths from 1990 to 1998 while the national rates remained relatively stable.

YEARS OF POTENTIAL LIFE LOST DUE TO ASTHMA AS UNDERLYING CAUSE

Altogether, a total of 610 years of potential life, or an average of 122.0 years were lost due to asthma-underlying cause of deaths among racial and ethnic minorities in Nebraska over the last five year period, 1998-2002. The above average represents a decrease of 60.6 percent over the previous five-year period, 1993-1997, when the average YPLL was 309.8 years, (Table 38).

The YPLL rate was highest among African Americans who averaged 87.4 year per year and a relative risk of 5.0 deaths per 100,000 population. African Americans lost a total of 437 YPLL (Table 38).

Table 38
Years of Potential Life Lost--- Asthma-Underlying Causes
Based on 75 Potential Years of Life
For Nebraska Racial and Ethnic Minority Populations
1993-1997 v. 1998-2002

	1993-1997			1998-2002		
	# of Total YPLL	Age-Adjusted Rate/100,000	Minority-to-White Ratio*	# of total YPLL	Age-Adjusted Rate/100,000	Minority-to-White Ratio*
Asthma-Underlying						
NE Total	3,627	44.8		2,478	29.2	
White	2,499	32.9		1,950	25.5	
African American	1,057	320.7	9.7	437	127.5	5.0
Native American	0	0.0	0.0	66	56.3	2.2
Asian American	71	71.7	2.2	26	27.9	1.1
Hispanic American	111	26.2	0.8	81	18.6	0.7
Average/Year (All Minorities)	309.8			122.0		
*Minority Age-Adjusted YPLL Rate/100,000 divided by White Age-Adjusted YPLL Rate/100,000						
SOURCE: Nebraska Health and Human Services System, Vital Statistics: Asthma Death Records						

PROGRESS TOWARD 2010 OBJECTIVES

Asthma target death rates were set for each of the racial and ethnic groups by age and not by race/ethnicity as a group as listed under Healthy People 2010 Objectives above. Although progress has been made in reducing the number of asthma deaths in Nebraska by 28 percent and the asthma death rates by 35.8 percent for African Americans (from 12.0 per

100,000 in 1993-1997 to 7.7 deaths during 1998-2002), this group remains approximately 4 times more likely than whites to die from asthma.

Furthermore, African Americans potentially lose 5.0 times as many years of potential life due to asthma as whites.

Based on the result of the comparison years, except for African Americans, asthma mortality numbers and rates are too small for other racial and ethnic groups to allow for comparisons to white. The asthma death rate in Douglas and Sarpy Counties was consistently higher than both the Nebraska and U.S. rates from 1987 through 1998. These two communities experienced a 27 percent increase in asthma deaths from 1990 to 1998 while the national rates remained relatively stable.

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GLOSSARY OF TERMS

Age-Adjusted Death Rate: A weighted average of a crude death rate according to a standard distribution. Age adjusting is a process by which the age composition of a population is held constant so that changes or differences in age composition can be eliminated from the analysis. This is necessary because older populations have higher death rates merely because death rates increase with age. Age adjusting allows the researcher to make meaningful comparisons over time and among groups in the risk of mortality. The death rates in this report have been adjusted according to the age distribution of the United States population in 2000 so that these rates are stabilized from fluctuation due to changes and difference in age composition of the population under study. This is calculated by The sum of Age-Specific Death Rates for Each Age Group, multiplied by Standard Population in each age Group, Divided by the Total standard Population.

Age-Specific Death Rate: The number of deaths in a specific age group per 100,000 population in the specific age group. It is calculated as the Number of Deaths in Age Group divided by the population in that Age group multiplied by 100,000.

Birth Rate: Measures the number of births that occur to 1,000 adults of reproductive age in any given year. Birth rates are based on information collected from birth certificates, combined with population estimates generated by the U.S. Bureau of the Census. Rates for males should be interpreted with caution, however, due to potential biases from underreporting.

Birth Weight: The first weight of the fetus or newborn obtained after birth. This weight should be measured preferably within the first hour of life before significant postnatal weight loss has occurred.

Body Mass Index (BMI): A measure of weight relative to height. A BMI of less than 25 is considered ideal or healthy; a BMI of 25-29 is considered overweight; and a BMI greater than 30 is considered to be indicative of obesity. BMI is calculated by dividing an individual's weight in kilograms by the individual's height in meters squared.

BRFSS: The Nebraska Behavioral Risk Factor Surveillance Survey, adapted from the National BRFSS. The following excerpts were taken from the Executive Summary of the 1997-1998 BRFSS Report for Nebraska, "The Nebraska Behavioral Risk Factor Surveillance System (BRFSS) has been conducting surveys annually from 1986 through the current year for the purpose of collecting data on the prevalence of major health risk factors among adults residing in the state. Information gathered in these studies can be used to target health education and risk reduction activities in order to lower rates of premature death and disability. This surveillance system is based on a research design developed by the Centers for Disease Control and Prevention (CDC) and used in all 50 states, the District of Columbia, and three U.S. territories." Telephone surveys with randomly selected Nebraska residents aged 18 years or older are conducted by the Nebraska Health and Human Services System. All data are age- and sex-adjusted to the Nebraska population (as determined by the U.S. Census) by use of direct standardization. This technique enables results from each year of the survey to be compared to all others for analysis of trends over time.

CDC: Centers for Disease Control and Prevention, based in Atlanta, GA.

Crude Death Rate: The number of deaths per 1,000 population, calculated by Number of Deaths divided by Population of the Area, multiplied by 1,000.

CVD: Cardiovascular Disease, primarily heart disease, stroke, and atherosclerosis.

Death Rate: A death rate is a ratio between mortality and population; the number of deaths per specific number of people. This is the most widely used measure to determine the overall health of a community. Death rates are usually computed per 100,000 population. Rates allow meaningful comparisons between groups of unequal size.

Diabetes, often times called *diabetes mellitus*, is a disease of the pancreas in which the body does not produce or properly use insulin, a hormone that is needed to convert glucose into energy. According to the Centers for Disease Prevention and Control (CDC), “Diabetes mellitus is a group of diseases characterized by high levels of blood glucose resulting from defects in insulin production, insulin action, or both. Diabetes can be associated with serious complications and premature death, but people with diabetes can take steps to control the disease and lower the risk of complications.”

Fertility Rate: The number of live births per 1,000 females 15-44 years of age. Calculated by number of live births divided by female population ages 15-44 multiplied by 1,000.

Healthy People 2010: Is a nationwide health promotion and disease prevention initiative that is committed to improving the health of all people in the United States during the first decade of the 21st century. Healthy People 2010 are designed to achieve two overarching goals: to increase quality and years of healthy life and to eliminate health disparities in the United States. It builds on Healthy 2000 and a previous set of national health objectives for 1990.

Hispanic: The term “Hispanic,” is used to aggregate several distinct populations of the Hispanic origin. Both the terms, “Latino” and “Hispanic” are now used interchangeably by the U.S. Government beginning with or since the 2000 Census. The term “Latino” generally refers to both men and women when there is no “distinction made to highlight “Latinas,” (or women).

Hypertension/High Blood Pressure: A systolic reading of 140mm Hg or higher over a diastolic reading of 90mm Hg and higher is an indication of hypertension or high blood pressure.

ICD-9: International Classification of Diseases, 9th Revision (1979-1998).

ICD-10: International Classification of Diseases, 10th Revision, 1999.

Incidence: Incidence is an estimate of the number of new cases of disease that develop in a population in a specified time period, usually one year. Incidence is often used as an indicator of the need for preventive measures, or to evaluate the effectiveness of existing programs.

Infant Death: Death of a person under one year of age.

Infant Death Rate: The number of infant deaths per 1,000 live births, calculated as number of infant deaths divided by number of live births, multiplied by 1,000.

Kotelchuk Index: It is a prenatal care index . “Special natality data summaries are prepared by the Office of Health Care Information. The office uses special programs to create an adequacy of prenatal care index, as formulated by Dr. Milton Kotelchuk. The index characterizes births as inadequate, intermediate, adequate and adequate plus as evaluated for when prenatal care began, weeks gestation, and number of recommended physician's visits. “The Adequacy of Prenatal Care Utilization Index (APNCU), also known as the Kotelchuck Index, is one of the methods used to assess adequacy of prenatal care. Data for assessing prenatal care is taken from information collected on birth certificates. This index combines the month of pregnancy when prenatal care began with the number of prenatal visits to their health care provider during pregnancy. It also takes into account the length of gestation. Using these criteria, prenatal care is rated inadequate, intermediate, adequate, or intensive use.’ The reports are available at <http://www.kdhe.state.ks.us/hci/kacui.html>. Data maintained within the Kansas Information for Communities interactive query system can also be analyzed for this index. The web site is <http://kic.kdhe.state.ks.us/kic/>.

Latinas: Refers to women of Latino descent.

Latinos: Used to aggregate several distinct populations of the Hispanic origin. When there is no “distinction made to highlight ‘Latinas,’ then the term ‘Latino’ will generally refer to both men and women.” “Latino” and “Latina” are now used interchangeably by the U.S. Government with or since the 2000 Census.

Life Expectancy at Birth: Life Expectancy at birth (LEB) is the average number of years that a group of people (often referred to as a *cohort*), would live if the group were to experience present age-specific death rates..

Low Birth Weight: A birth weight under 2500 gram or 5 pounds.

Maternal Death: Deaths attributable to delivery or the complications of pregnancy, childbirth or the puerperium.

Maternal Death Rate: The number of maternal deaths per 100,000 live births.

Medicaid: A state and federal program which funds and provides specific and approved health care and related services for individuals meeting certain eligibility conditions.

MBRFS: Minority Behavior Risk Factor Survey, adapted from the Nebraska BRFSS.

Morbidity: A term used to describe disease, sickness or illness, as a departure from normal physiological and psychological conditions. It is normally expressed as a morbidity rate. Morbidity rates give the closest frame of the quality of life and health status in a given population.

Mortality: A term used to describe death. It is normally expressed as a rate, expressing the proportion of a particular population who die of one or more diseases or of all causes during a specified unit of time, usually a year. It is also the probability of dying within a specified time period. This rate is also called the “crude death rate.”

Neonatal Death: Death of a person under 28 days of age.

Neonatal Death Rate: The number of neonatal deaths per 1,000 live births, calculated thus, Number of Neonatal Deaths divided by Number of live Births multiplied by 1,000.

Perinatal Death: Fetal deaths plus neonatal deaths.

Prevalence: Prevalence is an estimate of how many people have a specific condition or disease at a given point in time. This number is useful in assessing the level of medical and social care needed for current cases.

Postneonatal Death: Death of a person ages between 28 days and one year.

Postneonatal Death Rate: The number of post neonatal deaths per 1,000 live births, calculated as number of Postneonatal Deaths divided by the number of live births, multiplied by 1,000.

Relative Risk: Relative risks of **disease** or death were calculated using the following formula:

$$\text{Relative Risk} = \frac{\text{Age-Adjusted Mortality Rate (or Incidence) of Minority Population}}{\text{Age-Adjusted Mortality Rate (or Incidence) of White Population}}$$

A value of 1.0 indicates that the racial/ethnic minority population has a **risk of acquiring or dying from certain specific disease** equal to that of the white population. A relative risk of less than 1.0 means that the minority population is less likely than the white population to die of, or develop a certain type of disease. If the relative risk is greater than 1.0, the minority population suffers proportionally more illness or deaths from this condition than the white population.

Surveillance: The ongoing scrutiny of a condition or characteristic, generally using methods distinguished by their practicability, uniformity, and frequently their rapidity, rather than by complete accuracy. Its main purpose is to detect changes in trends or distribution to initiate investigative or control measures.

The Nebraska 2010 Health Goals and Objectives report outlines a set of health goals and objectives for the state that are to be achieved by 2010. This initiative shares the national goals of eliminating health disparities and increasing quality and years of healthy life for all people in Nebraska.

YPLL: Years of Potential Life Lost to a disease, condition or cause. This is an indicator of *premature death*. It is calculated using 75 years of potential life as the basis. For instance, infants who die at 6 months have lost 74.5 years of potential life. An adult who dies at the age of 50 years has lost 25 years of life.

ABBREVIATIONS

AACE	American Association of Clinical Endocrinologists
ACS	American Cancer Society
AHA	American Heart Association
AIDS	Acquired Immune Deficiency Syndrome
AJPM	American Journal of Preventive Medicine
ALA	American Lung Association,
ASCRG	American Society of Colon and Rectal Surgeons
BMI	Body Mass Index
BRFSS	Behavioral Risk Factor Surveillance System
CDC	Centers for Disease Control and Prevention
CHD	Coronary Heart Disease also called Ischemic Heart Disease or Coronary Artery Disease
CODES	Nebraska Crash Outcome Data Evaluation System
CSHSC	Center for Studying Health System Changes
CVD	Cardiovascular Diseases
HHS	U.S. Department of Health and Human Services
HSP	Human Services Policy
IOM	Institute of Medicine
LEB	Life Expectancy at Birth
MBRFSS	Minority Behavioral Risk Factor Surveillance Survey
NCEH	National Center for Environmental Health
NCHS	National Center for Health Statistics
NCI	National Cancer Institute

NCIPC	National Center for Injury Prevention and Control
NCLECJ	Nebraska Commission on Law Enforcement and Criminal Justice
NEJM	New England Journal of Medicine
NHIS	National Health Interview Survey
NVS	National Vital Statistics
TIPS	Tobacco Information and Prevention Source
YPLL	Years of Potential Life Lost

Disclaimer

While text, citations and data for health indicators were, to the best of the author's knowledge, current as the report was prepared, there may have been subsequent changes or developments which could alter the information provided herein.